

MYCOLOGIA

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ILLUSTRATIONS OF FUNGI—XXV

WILLIAM A. MURRILL

Several species of the genus *Venenarius*, formerly called *Amanita*, were figured in MYCOLOGIA 5: pl. 87. The accompanying plate shows additional varieties of the deadly amanita and another species which is quite rare. The drawings were made by Miss Eaton from specimens collected in or near New York City.

Venenarius solitarius (Bull.) Murrill

Amanita solitaria Fries

WARTED AMANITA

PINE-CONE AMANITA

Plate 190. Figure 1. $\times 1$

Pileus subglobose or convex, to plane, solitary, 5–20 cm. broad; surface dry, usually white or slightly yellowing, rarely cinereous or murinous, densely pulverulent, or pelliculose adorned with seceding, angular warts that may be soft, floccose, and flattened, or firm and erect, often becoming glabrous with age, margin smooth, at times appendiculate; context firm, white usually of mawkish flavor and odor resembling that of chlorin; lamellae usually adnexed and rather narrow, occasionally free and rounded behind, more or less crowded, white; spores ellipsoid, smooth, hyaline, very variable in size, $7-14 \times 5-9 \mu$; stipe subequal, usually radicate, bulbous or enlarged or equal below, concolorous or paler, mealy above, squamulose or imbricate-squamose below, solid or slightly spongy, 4–15 cm. long, 1–4 cm. thick; annulus white, apical, fragile or lacerate, often appendiculate or evanescent; volva white, usually friable, rarely remaining as concentric, margined scales or a short limb at the base of the stipe.

[MYCOLOGIA for July (8: 191–230) was issued July 15, 1916.]

An exceedingly variable species, usually white and scaly and often with a chlorin odor, occurring in the open or in thin woods throughout most of the United States. It has been considered edible, but Ford finds that it contains a small quantity of the deadly amanita-toxin found in *Venenarius phalloides* and it should therefore never be eaten. The variety here figured is one of the rarest forms assumed by this species in America, representing *Agaricus echinocephalus* Vitt. and *Agaricus onustus* Howe.

***Venenarius glabriceps* (Peck) Murrill**

SMOOTH-CAPPED AMANITA

Plate 190. Figure 2. $\times 1$

Pileus thin, ovoid, becoming broadly convex or centrally depressed, 5-10 cm. broad; surface glabrous, viscid when moist, rarely adorned when young with a few patches of the ruptured volva, white or yellowish-white, sometimes slightly brownish at the center, margin usually finely striate; context white; lamellae thin, crowded, free, unequal, white; spores globose, smooth, hyaline, 7.5μ ; stipe long, slender, stuffed, glabrous or floccose-squamulose, white, bulbous at the base, 7.5-15 cm. long, 6-12 mm. thick; annulus thin, white, sometimes appendiculate or evanescent; volva adnate, marginate, definitely circumsessile.

This rare and elegant species occurs among fallen leaves in woods in New York state. The surface is usually glabrous from the first, as in white and yellow forms of *V. phalloides*. Peck says his *Amanita phalloides striatula* is a small variety of this species.

***Vaginata albocreata* (Atk.) Murrill**

Amanitopsis albocreata Atk.

WHITE-BOOTED VAGINATA

Plate 190. Figure 3. $\times 1$

Pileus convex to expanded, 5-8 cm. broad; surface viscid, with floccose volval patches which usually mostly disappear with age, white with yellow center, or at times entirely pale-yellow, margin finely striate and minutely tuberculate; context thin, white; lamellae free or slightly adnexed, rounded in front, narrowed behind, floccose on the edges; spores globose, smooth, hyaline, $7-10\mu$; stipe cylindric or slightly tapering upward, abruptly bulbous, minutely floccose or farinose, white, hollow, 10-13 cm. long, 6-12

mm. thick; bulb ocreate, with limb narrow, as in *V. pantherinus*, and sometimes very slight; volval patches may occur in concentric lines on the lower part of the stipe.

Rare in open grassy places or thin woods from New York to Alabama. This species very much resembles *Venenarius glabriceps*, but is without an annulus. The volva is white and fits the base of the stipe closely like a stocking. Peck called this species *A. nivalis*.

***Lepiota aspera* (Pers.) Quél.**

SPINY LEPIOTA

Plate 190. Figure 4. $\times 1$

Pileus fleshy, hemispheric to convex and expanded, obtuse, at times depauperate, usually 7-12 cm. broad; surface appressed-tomentose, pale-ferruginous, decorated, especially near the center, with brown, compact, sometimes pointed, wart-like, separable scales; context moderately thick, white or yellowish; lamellae rather narrow, closely crowded, sometimes forked, white or yellowish, tapering behind, free, approximate; spores 5-10 \times 2-4 μ ; stipe thick, tapering upward from the bulbous base, fistulose or fibrous-stuffed, white and pruinose above the annulus, tomentose or fibrillose-scaly and ferruginous below, usually 8-12 cm. long, 8-12 mm. thick at the apex, and 18-25 mm. thick at the base; veil usually large, white, membranous, persistent, adherent in places to the margin of the pileus and annulate upon the stipe, at times reduced and fibrillose.

A rather frequent species in rich soil or humus in shaded places throughout most of the United States, and known under several names, such as *Lepiota acutesquamosa*, *L. Friesii*, *L. asperula*, and *L. eriophora*. It varies considerably in size and in the character of the spines, which are often reduced to mere wart-like, readily separable scales.

***Venenarius phalloides* (Fries) Murrill**

Amanita phalloides Quél.

DEADLY AMANITA

DESTROYING ANGEL

Plate 190. Figure 5. $\times 1$

Pileus convex or campanulate to expanded, 3-15 cm. broad; surface smooth, slightly viscid when moist, glabrous or decorated with scattered patches of the volva, varying in color from pure-white to yellow, yellowish-green, green, gray, brown, or blackish,

margin rarely striate; context extremely poisonous, white, not objectionable to the taste but having at times a somewhat disagreeable odor; lamellae white, unchanging, broad, ventricose, rounded at the base and free or adnexed; spores globose, smooth, hyaline, $7-10\mu$; stipe subequal, bulbous, long, smooth or floccose-scaly, usually white, stuffed or hollow, 6-15 cm. long, 0.5-1.5 cm. thick; annulus superior, membranous, thin, ample, persistent or at times becoming torn away, usually white; volva white, adnate to the base of the large, rounded bulb, the limb usually free, conspicuous, lobed, thick and fleshy, persistent, but at times breaking partly or wholly into irregular patches that are either carried up on the surface of the pileus or remain at the base of the stipe.

This most deadly species, for which no antidote is known, occurs widely distributed in many forms and colors, but is always distinguished by the presence of a distinct volva or death-cup at the base of the stipe. See *Mycologia* 5: *pl.* 87, *f.* 1 for an illustration of the common white form known as the destroying angel. The brown form figured on the accompanying plate is very rare about New York City but quite common farther north, where it attains a larger size.

It is frequently stated that poisons may be removed from mushrooms by boiling them in water and throwing the water away. This may be true of some species, but it is by no means true of the deadly amanita. This species has only recently been subjected to severe tests with both dry heat and steam without disorganizing or extracting the poison from the substance of the cap.

The variety of colors assumed by this species—white, yellow, green, gray, brown, blackish—and the fact that the annulus and the limb of the volva may sometimes be lost, make it necessary to use great caution in selecting any white-gilled species with bulbous stipe for food, whether an annulus is present or not. All species of *Venenarius* and *Vaginata*, and several species of *Lepiota*, must be examined with great care.

NEW YORK BOTANICAL GARDEN.

PHOTOGRAPHS AND DESCRIPTIONS OF CUP-FUNGI—IV. PEZIZA CLYPEATA

FRED J. SEAVER

(WITH PLATE 191, CONTAINING 2 FIGURES)

Among the fleshy cup-fungi, there are few which have been the subject of more confusion and misunderstanding than *Peziza clypeata* Schw. The species was originally described by Schweinitz from material collected in North Carolina.

A specimen collected October, 1883, by the late A. P. Morgan was sent to Mr. J. B. Ellis with the following note: "I enclose what I take to be *Peziza clypeata* Schw. Do you find this species? The substance is quite thick and firm; it spread out flat upon the wood; it grows on old rotten logs with a damp smooth surface." A note appended to this specimen apparently by Mr. Ellis states,—"probably = N. A. F. 568." This number had already been distributed under the name of *Psilopezia nummularia*. From this time the two species seem to have been confused.

In the "Discomycetes of the Miami Valley," Mr. Morgan¹ in referring to *Peziza clypeata* Schw. says: "I had always taken this for *Psilopezia nummularia* until I got Masee's work." In the same paper, referring to *Psilopezia nummularia*, he says: "Although the type of this species was sent from Cincinnati by Mr. Lea, I do not appear to have collected it, my specimens examined by Mr. Masee being pronounced *Peziza adnata* B. & C." Mr. Morgan, in the same paper, regarded this as a synonym of *Peziza clypeata* Schw. which it undoubtedly is, if Masee was correct in his determination of the Ohio specimen. *Peziza adnata*, a tropical plant described from Cuba, is said to have rough spores. This may be due to faulty observation, for the two species agree perfectly in other characters. At any rate, *Peziza clypeata* and *Peziza adnata* have come to be regarded as synonyms.

Although Mr. Morgan says that he had always regarded his

¹ Jour. Myc. 8: 189. 1902.

Ohio plants as *Psilopezia nummularia* Berk. until Masee's work caused him to change his mind, the letter referred to above written in 1883 by his own hand shows that he originally suspected that this was Schweinitz's plant and he was doubtless misled by the wrong determination of plants distributed by Mr. Ellis.² In his later paper on the "Discomycetes of the Miami Valley," it will be noted that his early suspicions were confirmed. To Mr. Morgan, therefore, probably belongs the credit of having worked out the identity of *Peziza clypeata* Schw.

In 1879, Dr. Peck redescribed this plant as *Bulgaria bicolor*. Later having apparently decided that it was not a *Bulgaria*, he transferred it to the genus *Peziza*. The specific name was untenable in this genus since it was preoccupied and the name *Peziza orbicularis* was used. I have examined the type of this species and find it identical with *Peziza clypeata*.

With the single exception of the specimen sent to Mr. Ellis in 1883, all of the plants of this species which have been studied in our collection—and the species has been collected frequently—have been called *Psilopezia nummularia* Berk, or *Peziza orbicularis* Peck. The object of the present paper is to call attention to the identity of the plant and its synonyms.

Except for a slight difference in the color of dried plants, *Psilopezia juruensis* P. Henn. does not seem to differ. Specimens of this species from South America have been examined.

The fact that these plants occur on much decayed wood renders it difficult to determine its substratum with certainty. Dr. Peck reports his plants on decaying birch. Our own appeared to be growing on decaying soft maple. In most cases the plants are reported simply on rotten wood.

While *Psilopezia nummularia* Berk. is usually regarded as a distinct species, there is enough similarity between the two to partly justify the confusion which has existed. The two are similar in spore characters and color. Both are adnate to the wood on which they grow. In *Psilopezia nummularia*, however, the plants appear to be smaller—they were originally described as one third of an inch in diameter—and always entirely adnate and surrounded by a white mycelial border. The margin

²North American Fungi 568

appears never to be elevated in young plants as it is in *Peziza clypeata* Schw. *Psilopezia nummularia* has not been so frequently collected and probably for this reason its characters are not so well known.

The following description of *Peziza clypeata* Schw. is based on a study of fresh plants which have been collected and studied for the past three or four seasons. Colored sketches of the plants in all stages have also been preserved. The accompanying illustrations were made from fresh plants and show both the old and young stages of development.

- PEZIZA CLYPEATA Schw. Schr. Nat. Ges. Leipzig 1: 117. 1822
Peziza adnata Berk. & Curt. Jour. Linn. Soc. 10: 365. 1868.
Bulgaria bicolor Peck, Ann. Rep. N. Y. State Mus. 32: 49. 1879.
Peziza orbicularis Peck, Bull. N. Y. State Mus. 2: 20. 1887.
Discina adnata Sacc. Syll. Fung. 8: 100. 1889.
Discina clypeata Sacc. Syll. Fung. 8: 101. 1889.
Discina orbicularis Sacc. Syll. Fung. 8: 103. 1889.
? *Peziza Barlaeana* Bres. Fungi Trident. 2: 74. 1892.
Psilopezia juruensis P. Henn. Hedwigia 43: 273. 1904.
? *Pachyella Barlaeana* Boud. Hist. Class. Discom. Eu. 50. 1907.
Psilopezia orbicularis Dodge, Trans. Wisc. Acad. Sci. 17: 1052. 1913.

Apothecia gregarious but not usually crowded, at first globose, gradually opening, soon becoming shallow cup-shaped, later discoid, regular in outline or occasionally more or less distorted when old, becoming closely adnate to the substratum to the extreme margin or with a narrow margin free and slightly upturned, varying in size from a few mm. when young to 3 or 4 cm. when mature; hymenium at first dark reddish brown, smooth and glistening, later assuming an olive tint and losing its luster, when old greenish-black (almost entirely black when dried), splitting in old specimens, giving rise to whitish vein-like markings, the splitting due to the unequal shrinkage of the apothecium and the substratum, substance soft, inclined to waxy; asci cylindric, reaching a diameter of 17μ , often spirally twisted when dry; spores 1-seriate, ellipsoid, smooth, hyaline, with 1 or 2 large oil-drops, $12-14 \times 25-27$, or rarely $30-33\mu$; paraphyses adhering together, septate, strongly enlarged above, reaching a diameter of 7 or 8μ , densely filled with yellowish-brown coloring matter.

On much decayed deciduous logs of various kinds which are saturated with water.

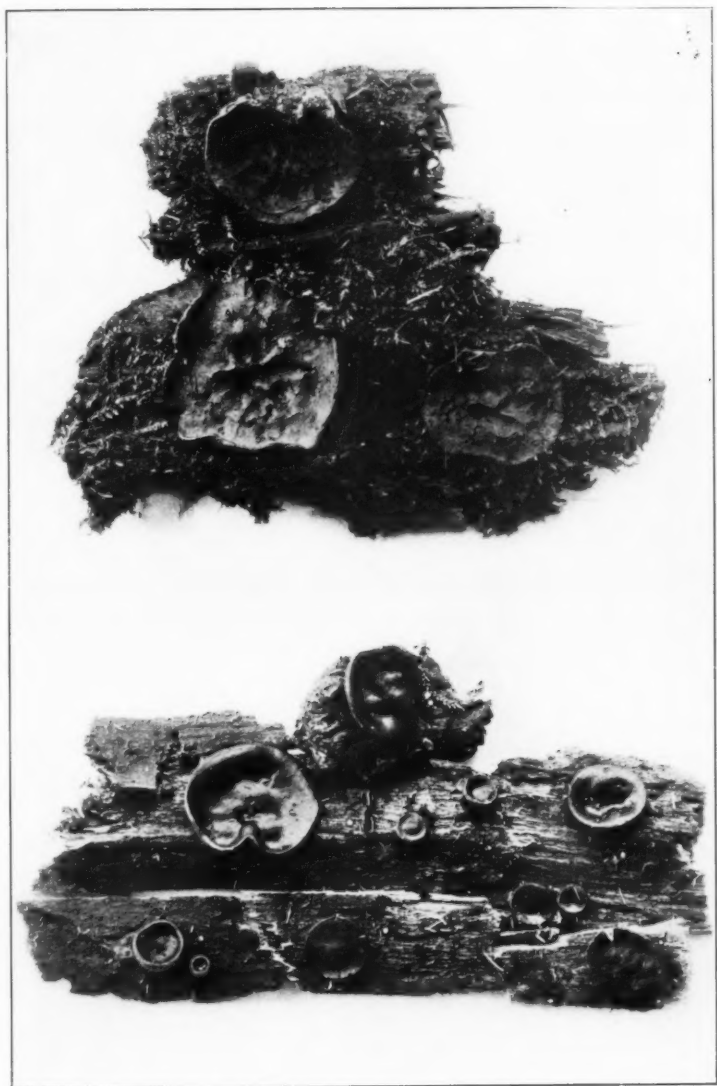
TYPE LOCALITY: North Carolina.

DISTRIBUTION: New York to Wisconsin, North Carolina and Cuba; also in South America.

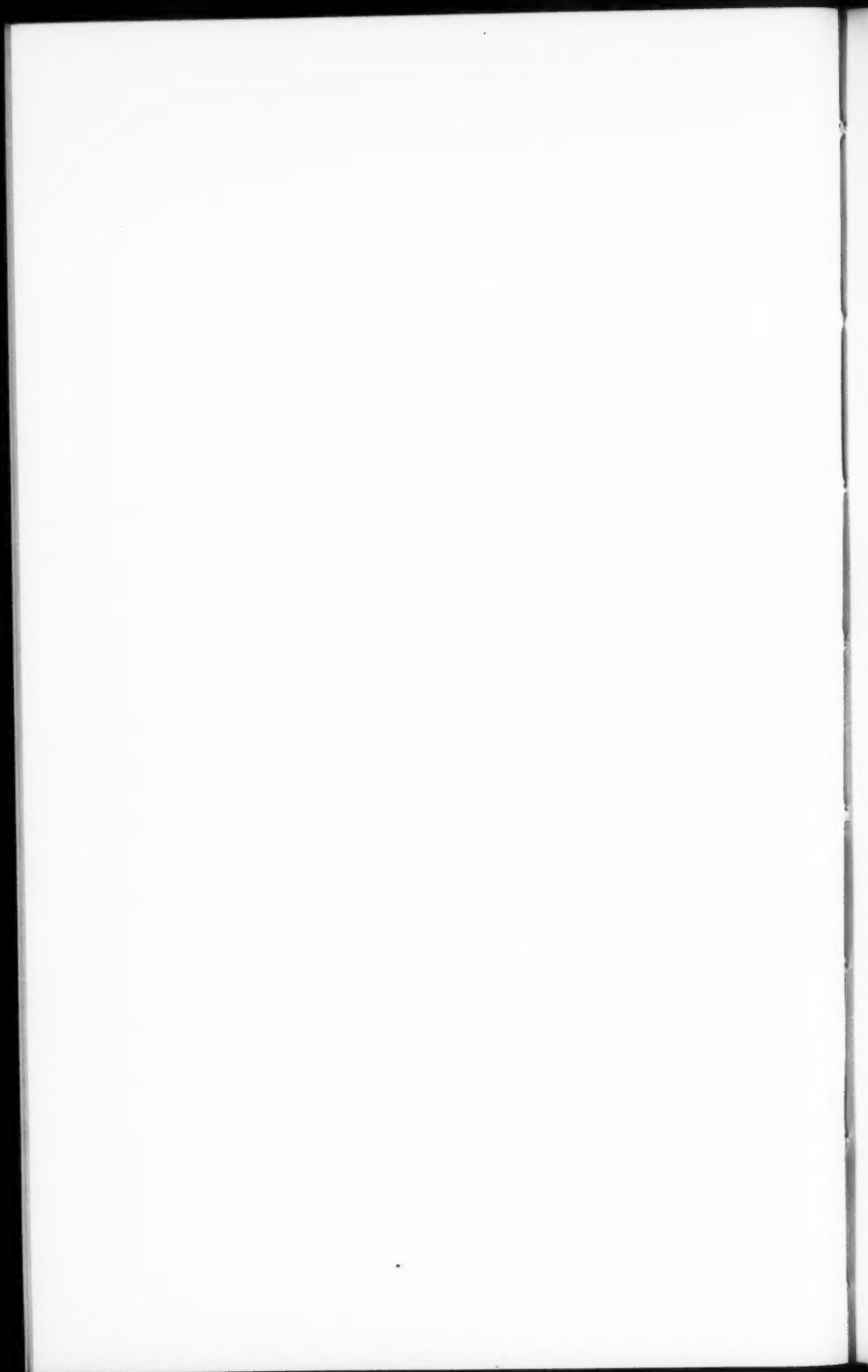
ILLUSTRATIONS: Peck, Bull. N. Y. State Mus. 2: pl. 2, f. 4-6; Hedwigia 43: 273, f. 1-3: (?) Boud. Ic. Myc. pl. 310; (?) Bres. Fungi Trident, pl. 187.

EXSICCATI: Ellis, N. Am. Fungi 568 (as *Psilopezia nummularia* Berk.).

NEW YORK BOTANICAL GARDEN.



PEZIZA CLYPEATA SCHW.



A NEW SPECIES OF ENDOTHIA

STEPHEN C. BRUNER

(WITH PLATE 192, CONTAINING 5 FIGURES)

On the grounds of the Estación Experimental Agronómica and elsewhere in the vicinity of Santiago de las Vegas, the writer has found an *Endothia* to be quite common on several species of *Eucalyptus* and on the mango (*Mangifera indica*). Microscopical and cultural studies have shown this form to be distinct from any previously described species. On *Eucalyptus*, the fungus is usually found on the bark of dead or injured trees. It is also sometimes seen on the outer layers of rough bark on large healthy trees. On mango, the fungus has been found only on dead branches lying on the ground. No perithecia have yet been obtained from this source, but in culture this form is indistinguishable from that on *Eucalyptus*. The pycnidial stage of the fungus has also been observed on the avocado (*Persea gratissima*) and the jobo (*Spondias mombin*). A specimen on the last was collected near Herradura in the province of Pinar del Rio by Dr. C. L. Shear, of the United States Department of Agriculture, and kindly presented to the writer by him. This is the only instance so far known of the occurrence of this *Endothia* on a native tree, although the fungus itself is undoubtedly of Cuban origin.

In general characters, the fungus rather closely resembles *Endothia radicalis* (Schw.) DeNot. However, the ascospores are larger and slightly different in form, and in culture the color reactions of the two are quite distinct.

CULTURAL CHARACTERS

Boiled rice, sterile *Eucalyptus* twigs, and potato agar were the media found most satisfactory in studying this fungus, although others were used to some extent. These were prepared according to the following formulae:

Rice. Place 3 grams of dry commercial rice and 10 cc. of dis-

tilled water in test tubes and autoclave at 115° C. for one-half hour.

Eucalyptus twigs. Select twigs of *Eucalyptus botryoides* about $\frac{1}{4}$ inch in diameter, and by alternate diagonal and transverse cuts divide into sections approximately $1\frac{1}{2}$ inches long. Place with the slanted surface upward in test tubes containing 2 or 3 c.c. of distilled water. Autoclave for 15 minutes at 115° C.

Potato agar. Boil 250 grams of sliced potato in 1000 cc. of distilled water for 1 hour. Filter through cotton. Restore loss due to evaporation, etc. Add 115 grams of shredded agar; steam until thoroughly dissolved. Filter through cotton. Tube and autoclave for 15 minutes at 115° C.

All cultures were incubated under ordinary laboratory conditions, the mean temperature during the period being 21.5° C.

Cultures on Rice.—On this medium the behavior of the fungus is characterized by a rather tardy and scant production of pigment—a character which readily distinguishes it from the other known species of *Endothia* occurring in North America and the West Indies. Within three or four days after inoculation, there is a somewhat short cottony growth of mycelium over the upper surfaces of the medium. After five to seven days, small points of orange-yellow appear in places where the pycnidia are beginning to form and the older aerial mycelium changes to ivory-white or pale-buff. In about fifteen days, the rather large yellow pycnidia mature and exude moist masses or tendrils of bright-yellow or orange-colored spores. No marked submerged color changes of any kind take place, the medium merely turning to a pale-dirty-buff as growth proceeds. The aerial mycelium remains white or pale-buff and the yellow color is seen only where the pycnidia have developed. No further changes occur except that in old cultures pycnidia formed against the sides of the tubes often become dark-brown.

Cultures on Eucalyptus Twigs.—Cultures five days old show a thin web-like growth over the cut surfaces, with here and there small masses of yellowish mycelium where pycnidia are beginning to form. Two days later, a few pycnidia mature and the exudation of spore masses begins. Pycnidia continue to form on the cut surfaces and later on the bark. The surface growth re-

mains rather thin and clinging, becoming pale-buff when old. Cultures fifteen days old show numerous large pale-yellow or buff pycnidia on the cut surfaces and a smaller number scattered over the bark. These in many cases exude moist masses or tendrils of orange-yellow spores. Further changes consist mainly in the formation of additional pycnidia and a somewhat heavier growth of surface mycelium.

Cultures on Potato Agar.—Single ascospores when transferred to tubes of potato agar produce in one week hyaline growths which extend on the surface from 4 to 10 mm. from the point of inoculation. The submerged growth is somewhat less extensive. The advancing edges are irregularly denticulate and slightly undulate in outline, and the surface presents a gently contoured, somewhat fluted appearance. In from 8 to 10 days after inoculation numbers of yellow pycnidia are formed in a group on the lower portion of the slant. These are more or less connected by a short cream white growth of surface mycelium. Except for a small amount of downy white mycelium at the upper edge of the medium and an occasional tuft at the point of inoculation, no other surface growth of any kind is developed. The pycnidia soon after their formation emit masses of orange-yellow spores. No submerged color is produced and, except for the gradual drying of the medium, there are no further changes of any kind.

***Endothia havanensis* sp. nov.**

Stroma innate, then erumpent, gregarious, at first bright-yellow, later orange-colored, finally yellow-brown when very old, interior immediately surrounding perithecia lighter in color than outer layers, cream-white or pale-buff in newly formed stromata, commonly roundish wart-shaped to sub-elongate, $2-15 \times 2-4$ mm., varying according to the situation in which formed. Perithecia black, globose with long necks, deeply imbedded in stroma, usually $275-400 \mu$ in diameter; ostioles dark, distinct, exerted on slender protuberances of varying lengths, these commonly $200-1000 \times 90-135 \mu$; asci sub-clavate, eight-spored, aparaphysate, $33-41 \times 5-7.5 \mu$; ascospores subdistichous, fusoid, two-celled, constricted at the septum, usually minutely guttulate, hyaline, often slightly inequilateral, $7.47-9.54 \times 2.92-4.15 \mu$; pycnidia formed as irregular cavities in the stroma; pycnospores minute, rod-shaped with rounded ends, hyaline, $2.9-4.5 \times .83-1.66 \mu$; erupting from indefinite ostioles in yellow or orange-yellow tendrils.

Habitat in dead bark of *Eucalyptus occidentalis* Endl., *E. botryoides* Sm., *E. rostrata* Schlecht., *E. microphylla* Willd., *E. robusta* Sm., *Persea gratissima* Gaertn. f., and *Mangifera indica* L., near Santiago de las Vegas, Havana, and *Spondias mombin* L., near Herradura, Pinar del Rio, Cuba.

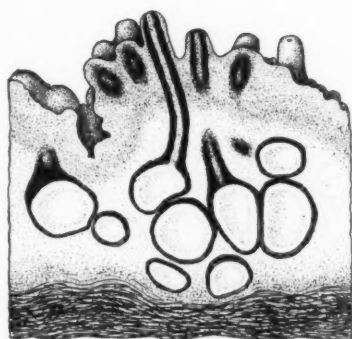
The writer is indebted to Dr. C. L. Shear for supplying cultures and specimens of *Endothia longirostris* Earle and to Mr. R. H. Feild of Taylorsville, N. C., for specimens of *Endothia radicalis* (Schw.) DeNot.

ESTACIÓN EXPERIMENTAL AGRONÓMICA,
SANTIAGO DE LAS VEGAS, CUBA.

EXPLANATION OF PLATE CXCII

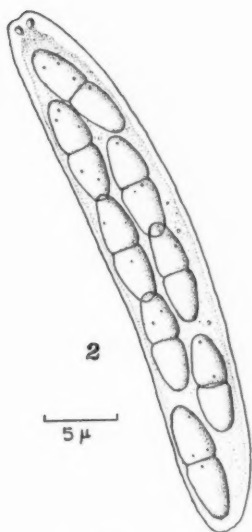
Endothia havanensis Bruner

- Fig. 1. Sectional view of stroma showing perithecia.
Fig. 2. An ascus.
Fig. 3. Ascospores.
Fig. 4. Section of young stroma showing pycnidial cavity.
Fig. 5. Pycnospores (see Fig. 3 for scale).
All figures drawn with the aid of a camera lucida.



.5 mm.

1

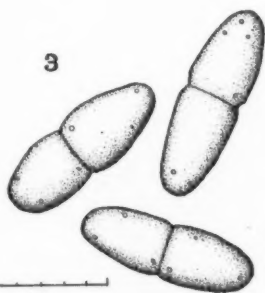


2

5 μ

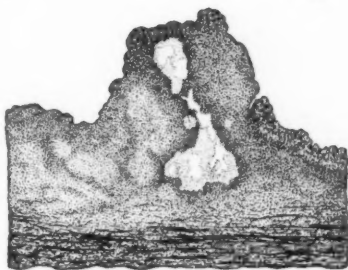


5



3

5 μ



.5 mm.

4

ENDOTHIA HAVANENSIS BRUNER



DR. H. E. HASSE

HERMANN EDWARD HASSE,—LICHENIST

BRUCE FINK

With the passing of Doctor Hasse, October 15, 1915, botanical science lost the man who has added, it seems, the largest number of lichens to our North American flora, through his own collecting, since the days of Tuckerman. In a letter to the present writer, in 1905, Doctor Hasse said, referring to a mention of his work, "As to the very kind mention you have made of my very unworthy self in the historical part of your paper, I must say that I can scarcely deserve so much credit as you have awarded me. It has been almost entirely a matter of muscle and luck rather than brains in collecting species." However, we must still insist that the keen observation and the great pains and zeal shown in collecting so many rare things as did the late Californian lichenist involve much more than "muscle and luck." This is especially true since he entered the work after the conspicuous species had been named, and his new species were almost entirely obscure ones. But again we may call attention to the fact that Doctor Hasse's best work was accomplished, as will be seen, after the date at which he wrote the above statement.

The present writer began with Doctor Hasse, soon after his first paper on lichens appeared in 1895, a correspondence which extended through two decades. Doctor Hasse was an isolated worker and was more communicative by letter than are most botanists. Thus it comes that through this correspondence of twenty years, we have before us the main facts regarding the life of the subject of our sketch. He wrote in one letter of his birth in Freiburg, Germany, in 1836, and of his migration to America at nine years of age. Ten years later he began to work for "a druggist, a thorough chemist and botanist, to whose instruction," he says he owed "the predilection for the latter science." He began the study of medicine in St. Louis in 1856, but went to Europe the following year, where he continued the study for four years, mainly at Leipzig, with short periods of study at Prague

and Wurzburg. Returning to America in 1861, he served throughout the entire Civil War as surgeon to the 9th and the 24th Wisconsin Infantry Regiments. Throughout the war, he carried a copy of the 1857 edition of Gray's Manual, which he kept to his last days as a cherished souvenir, well filled with annotations about plants observed.

After the war, Doctor Hasse practiced medicine in Wisconsin, Missouri, Arkansas, and California, entering the last State in 1879. Ten years later, he was appointed surgeon to the Soldier's Home near Santa Monica, California, and it was in this position that botanists came to know him as a student of lichens. He resigned in 1905 and, for the last ten years of his life, gave his attention largely to the study of his favorite plants. He says in one of his letters, "I took up with lichens about 1880. But the real incentive was given about 1890, by a circular from the late Doctor Stizenberger, in which he desired contributions of Pacific Coast lichens." So it appears that Doctor Hasse worked as a collector for fifteen years before botanists became aware of him through his papers, and was at work for thirty-five years instead of merely the twenty years during which his papers were appearing frequently.

As is well known, our Californian collector and student of lichens began his work at a time when it was difficult to get much help in America. By that time he was needing help badly. Tuckerman was dead, and Willey was beyond his active years. Writing in 1896 he said, "Professor Farlow has, with great kindness, helped me out, but I am fearful of encroaching too much upon his time." Aside from this help, Doctor Hasse had no choice but to continue to send his material to Doctors Stizenberger, Nylander, and Zahlbruckner in turn. Hence the early new species were named entirely by these three European lichenists, though Doctor Hasse has in recent years named a considerable number of his new species for himself, working against the handicap of lack of literature and large collections of specimens. The three European lichenists frequently sent the names of new species with very brief diagnostic notes or none at all. In some instances descriptions were written later by themselves, or perhaps more often by Doctor Hasse as we infer from his state-

ments in letters to the present writer. How many of these still remain undescribed, could only be determined by a comparison of Doctor Hasse's correspondence with the three lichenists named with the lists of new species published as a result of his many years of collecting.

Doctor Hasse's work grew constantly in interest and importance from 1895, when his first contribution appeared until the time when his largest contribution appeared in 1913. The genus *Hassea* and several species were dedicated to him. The total number of new species resulting from his collecting in southern California in twenty-five years is not far from 75. "The lichen flora of Southern California," published in 1913 by the Smithsonian Institution, a manual of 145 pages, containing descriptions of about 400 species of lichens, with good keys, is a fitting monument to his industry and his knowledge of the lichen flora of the region covered. As will be noted in the list of titles to follow, a number of additions to the flora of the region were made after the appearance of this work.

In 1906, Mr. John I. Kane presented to the New York Botanical Garden about 3,000 species and many duplicates from Doctor Hasse's herbarium. After the death of Doctor Hasse, a large collection of lichens was purchased for the Cryptogamic Herbarium of Harvard University from Mrs. Hasse. The collection now at Harvard must be the one used by Doctor Hasse in his final work on the lichen flora of Southern California.

LIST OF PAPERS BY DOCTOR HASSE

Lichens of the vicinity of Los Angeles. I. *Erythea* 3: 41-44. 1895.

A list of 90 lichens with habitats. *Rinodina angelica* and *Verrucaria plumbaria* were named by Doctor Stizenberger.

Lichens of the vicinity of Los Angeles. II. *Erythea* 4: 96-98. 1896.

A list of 29 lichens with habitats, determined by Doctor Stizenberger.

Lichens of the vicinity of Los Angeles. III. *Erythea* 4: 106-108. 1896.

A list of 56 lichens with habitats. *Lecanora redimita* and *Biatora phaeophora* were named by Doctor Stizenberger.

Lichens of the vicinity of Los Angeles. IV. *Erythea* 4: 150, 151. 1896.

A list of 17 lichens, mostly determined by Doctor Farlow.

New species of lichens from Southern California as determined by Dr. W. Nylander and the late Dr. Stizenberger. *Bull. Torr. Bot. Club* 24: 445-449. 1897.

Descriptions of 19 new lichens as follows: *Parmelia subolivacea* Nyl.,

Heppia terrena Nyl., *Lecanora pleistospora* Nyl., *L. pleistospora* Nyl., *L. rediunta* Stiz., *L. obpalens* Nyl., *L. (Placodium) subpyracea* Nyl., *L. stenospora* Stiz., *Rinodina angelica* Stiz., *Lecidea dolodes* Nyl., *L. subplebia*, *L. catalinaria* Stiz., *L. (Biatora) phaeospora* Stiz., *L. squalida persimilans* Nyl., *Arthonia subdisjuncta* Nyl., *Verrucaria plumbaria* Stiz., *V. submuralis* Nyl., *V. squamella* Nyl., and *V. inductula* Nyl.

Lichens of Southern California. Pamphlet, 1-18. Los Angeles, R. R. Baumgartner and Company, 1898.

A list of 307 lichens with notes, being a second edition of the portion on lichens in McClethie's Seedless Plants of Southern California, 1897. New lichens named by Doctor Nylander are *Homodium microdium*, *Collempsis segregata*, *Pannularia ruderatula*, *Heppia leptopholis*, *Lecanora (Placodium) peludella*, *L. subdispersa*, *L. praecrenata*, *L. glaucopisma*, *Arthonia pruinosella*, *Lecidea admiscens*, *L. atrolutescens*, *L. fuscatoatra*, and *Verrucaria bacillosa*.

New species of lichens from Southern California determined by Professor W. Nylander. Bull. Torr. Bot. Club 25: 632, 633. 1898.

The species described are four: *Lecanora praecrenata*, *Arthonia pruinosella*, *Thelopsis subporinella*, and *Lecidea triphragmioides*.

The genus *Dirina* in North America. Bull. So. Cal. Acad. Sci. 13: 26, 27. 1902.

Notes on *Dirina rediunta* (Stiz.) Zahlbr. and *D. Hassei* Zahlbr.

The lichen flora of San Clemente Island. Bull. So. Cal. Acad. Sci. 2: 54, 55. 1903.

A list of 22 lichens with habitats.

Contributions to the lichen flora of the California Coast Islands. Bull. So. Cal. Acad. Sci. 2: 23-26. 32-35. 1903.

The two lists contain somewhat more than 100 lichens with localities. Additions to the lichen flora of Southern California. Bull. So. Cal. Acad. Sci. 2: 52-54. 58-60. 71-73. 1903.

Lists of about 120 lichens with notes. Nineteen lichens are spoken of as new. Of these 15 had been previously described, while *Buellia triphragmioides* appears as a nomen nudum. New and described by Nylander are *Lecidea dolodes*, *Verrucaria discordans*, and *V. dacryodes*. Contributions to the lichen flora of Southern California. Bull. So. Cal. Acad. Sci. 5: 38-45. 1906.

A list of 98 lichens with notes.

A few lichens picked up on San Jacinto Mountain. Bull. So. Cal. Acad. Sci. 4: 123-125. 1906.

A short list with notes.

Unreported plants from the vicinity of Los Angeles, California. Muhlenbergia 3: 114. 1907.

Consists of notes on two rare seed plants.

Lichens collected in the Tehachapi Mountains, California. Bryologist 11: 55-57. 1908.

A list of 56 lichens with notes.

Additions to the lichen flora of Southern California. Bryologist 11: 6, 7. 1908.

A list of 16 lichens with notes. *Lecanactis salicina* Zahlbr. appears as a nomen nudum.

Lichens collected in the Tehachepi Mountains (a correction). Bryologist 11: 74. 1908.

A note correcting two citations of authors in the previous paper.

Additions to the lichen flora of Southern California. Bryologist 13: 60-62. 1910.

Descriptions of five lichens, of which *Bacidia clementis* Hasse and *Haematomma pacifica* Hasse are new species.

Additions to the lichen flora of Southern California. No. 4. Bryologist 13: 111-112. 1910.

The paper consists of descriptions of three lichens, of which *Lecanora marginalis* Hasse is new.

Additions to the lichen flora of Southern California. No. 5. Bryologist 14: 2-4. 1911.

Descriptions of five lichens, of which *Biatorella terrena* Hasse, *Acarospora peltata* Hasse, and *Caloplaca verrucosa* Hasse are new.

Additions to the lichen flora of Southern California. No. 6. Bryologist 14: 100-102. 1911.

The paper consists of descriptions of the following new species, named by Hasse: *Heppia Zahlbruckneri*, *Bacidia Kingmani*, *Dirina catalinariae*, and *Caloplaca Rosei*.

Additions to the lichen flora of Southern California. No. 7. Bryologist 15: 45-48. 1912.

Descriptions of nine rare lichens, of which *Lecidea bullata* Hasse and *Mycoporellum Hassei* Zahlbr. are new.

Additions to the lichen flora of Southern California. No. 8. Bryologist 16: 1, 2. 1913.

The paper consists of descriptions of four lichens, of which *Maronea constans subleideina* Zahlbr. and *Dermatocarpon Zahlbruckneri* Hasse are new.

The lichen flora of Southern California. Cont. U. S. Nat. Herb. 17: I-XIII. 1-132. 1913.

This publication contains good keys, and descriptions of about 400 lichens, of which about 65 were discovered in the region covered. New species are *Microglæna subcorallina* Hasse, *Endocarpon lepidallum* Nyl., *Thelopsis subporinella* Nyl., *Mycoporellum epistigmellum* Hasse, *M. Hassei* Zahlbr., *Lecidea fuscatoatra* Nyl., *L. subplebeia* Nyl., and *Acarospora aeruginosa* Hasse.

Report of the lichen department for 1913. Bryologist 17: 15. 1914.

A new *Reinkella* from Mexico, *Reinkella Parishii* Hasse. Bryologist 17: 45, 46. 1914.

Additions to the lichen flora of Southern California. No. 9. Bryologist 17: 61-63. 1914.

Lecania fructigena Zahlbr., *Acarospora californica* Zahlbr., *Placolecania Hassei* Zahlbr., and *Lecanora peltastictoides* Hasse are new.

A new species of *Blastenia*. Bryologist 17: 92. 1914.

Doctor Hasse describes *Blastenia Herrei* from Washington.

Report of the lichen department for 1914. Bryologist 18: 15, 16. 1915.

Additions to the lichen flora of Southern California. No. 10. Bryologist 18: 22, 23. 1915.

Two of Doctor Zahlbruckner's new species are described, *Rinodina dirinoides* and *R. euryspora*.

A note on *Blastenia Herrei* Hasse. Bryologist 18: 29. 1915.

The note states that this species is a synonym for *Lecanora atrosanguinea* Merrill, previously described.

Additions to the lichen flora of Southern California. No. 11. Bryologist 18: 76-79. 1915.

A list of species with notes.

MIAMI UNIVERSITY,
OXFORD, OHIO.

SOME KENTUCKY FUNGI

L. O. AND MAE F. OVERHOLTS

In the summer of 1915, the writers spent three days, July 10-12, collecting fungi in Madison County, Kentucky. The first place visited was Richmond, where only a few collections were made in the limited time available. The journey was then continued to Berea, at the base of the Cumberland Mountains, where the remainder of the time was spent. The region west and south of Berea is extremely rough, and the hills and valleys yielded a great profusion of fleshy fungi after the copious rains of several previous weeks.

Very little attention has been given to the fungous flora of Kentucky. In 1909, Dr. Bruce Fink spent portions of the months of August and September in this same region. He made about seventy-five collections of *Boletaceae*, representing about thirty species. These were identified by Dr. Murrill and the list published by him in *Mycologia* for November of that year. A few collections belonging to families other than the *Boletaceae* were subsequently turned over to the senior writer and are included in the present list. Aside from the above mentioned brief account, no local check list has ever been published from any locality within the state.

The fungous flora of Kentucky is of particular interest in that it combines the flora of the north central prairie states with that of the Appalachian Mountains. In addition, we may expect to find within the state a considerable number of typically southern species. It was thought that the present list might be of interest to workers within the state, or might stimulate collectors in other parts of the state to publish their results, for it is only through the united efforts of a large number of local collectors that we can become acquainted with the fungous flora of any large region.

The present list is recognized to be extremely incomplete and perhaps it does not represent as much as one-tenth of the number of species that may be expected to occur within the state. Most

of the collections were made either on the wooded campus of Berea College or else in Cow Bell Hollow, a wooded tract also owned by the college and distant about four miles from the town. Big Hill, another station, is in the same locality. Specimens of all but a few of the species listed here are preserved in the herbarium of the senior writer. We are under special obligation to Professor C. D. Lewis, of Berea College, for supplying facilities for drying the specimens in the biological laboratory.

ASCOMYCETES

Leotia chlorocephala Schw. On the ground by stream. Cow Bell Hollow.

BASIDIOMYCETES

1. Tremellaceae

Tremella albida Fries. On oak wood. Berea College Campus. At least this is the plant that goes by the above name in this country.

2. Thelephoraceae

Craterellus cantharellus Schw. ex Fries. On the ground under oaks. Berea College Campus.

C. cornucopioides L. ex Pers. On the ground in woods. Cow Bell Hollow.

Stereum fasciatum Schw. On oak log. Cow Bell Hollow.

Thelephora anthocephala Bull. ex Fries. On the ground in oak woods. Berea College Campus.

T. palmata Scop. ex Fries. On the ground in woods. Cow Bell Hollow.

Tremellodendron pallidum Schw. On the ground in woods. Cow Bell Hollow. (= *Thelephora Schweinitzii*.)

3. Clavariaceae

Clavaria fusiformis Sow. On the ground in woods. Big Hill, August 18, 1909, Dr. Bruce Fink. Three other collections of *Clavaria* were made, none of which have been positively identified.

4. Hydnaceae

Hydnum adustum Schw. On oak limbs. Cow Bell Hollow.

H. erinaceum Bull. Dried specimen found in Botany laboratory of Berea College. Data unknown.

H. zonatum Batsch. ex Fries. On mossy ground. Cow Bell Hollow.

5. Polyporaceae

Fomes applanatus Pers. ex Wallr. On oak log. Cow Bell Hollow.

F. lobatus Schw. ex Cooke. Around old stump. Cow Bell Hollow.

F. rimosus Berk. On living black locust. Richmond.

Polyporus Berkeleyi Fr. On the ground at base of oak tree. Berea College Campus.

- P. cinnabarinus* Jacq. ex Fries. On oak log. Cow Bell Hollow.
P. cinnamomeus Jacq. ex Fries. On mossy bank. Cow Bell Hollow.
P. Curtisii Berk. Around stump. Cow Bell Hollow.
P. gilvus Schw. ex Fries. On oak wood. Berea College Campus.
P. hirsutus Wulfen ex Fries. On dead wood. Berea College Campus.
P. fargameneus Fries. In wounds on living oak. Berea College Campus.
P. robinophilus Murrill ex Lloyd. On living black locust. Richmond.
P. semipileatus Peck. On dead oak limbs. Cow Bell Hollow.
P. tulipiferus Schw. ex Overholts. On dead oak limbs. Berea College Campus.
P. versicolor L. ex Fries. On dead branches and on old stumps. Berea College Campus.
Trametes carnea Nees ex Cooke. On dead pine logs. Big Hill, August 25, 1909, Dr. Bruce Fink.

6. Boletaceae

- Boletus auriporus* Peck. On the ground in oak woods. Berea College Campus.
B. felleus Bull. On the ground in open woods. Cow Bell Hollow.
B. retipes Berk. & Curt. On the ground in woods. Cow Bell Hollow.
Fistulina hepatica Fries. At base of living chestnut. Cow Bell Hollow.
Strobilomyces strobilaceus Scop. ex Berk. Around a rotten log. Cow Bell Hollow.

7. Agaricaceae

- Amanita caesarea* Scop. ex Fries. On the ground in oak woods. Cow Bell Hollow.
A. Frostiana Peck. On a rotten log in mixed woods. Cow Bell Hollow.
A. phalloides Fries. On the ground in oak woods. Berea College Campus.
A. rubescens Fries. On the ground in oak woods. Berea College Campus.
Amanitopsis albocreata Atk. On the ground in oak woods. Berea College Campus.
A. agglutinata Berk. & Curt. On a clay bank. Cow Bell Hollow.
Cantharellus cibarius Fries. On the ground in mixed woods. Cow Bell Hollow.
C. cinnabarinus Schw. On the ground in oak woods. Berea College Campus.
C. minor Peck. On the ground in mixed woods. Cow Bell Hollow.
C. infundibuliformis Scop. ex Fries. On the ground in mixed woods. Cow Bell Hollow.
Clitocybe illudens Schw. Around an oak stump in mixed woods. Cow Bell Hollow.
C. laccata Scop. ex Fries. On the ground in mixed woods. Cow Bell Hollow.
C. infundibuliformis Schaeff. ex Fries. Among leaves in mixed woods. Cow Bell Hollow.
Collybia platyphylla Fries. On an old log in mixed woods. Cow Bell Hollow.
C. radicata Relh. ex Fries. On the ground in clearings. Cow Bell Hollow.
Hygrophorus miniatus Fries. On the ground in woods. Cow Bell Hollow.
Hypholoma incertum Peck. On the ground under oaks. Berea College Campus.
Lactarius Gerardii Peck. On the ground in woods. Cow Bell Hollow.
L. lactiflua L. ex Burl. On the ground in woods. Cow Bell Hollow.
L. subdulcis Pers. ex Fries. On the ground in oak woods. Berea College Campus.

L. trivialis Fries. On the ground in woods. Cow Bell Hollow.

Lepiota Morgani Peck. On grassy ground along street. Berea.

Marasmius siccus Schw. Among leaves on the ground under oaks. Cow Bell Hollow.

Paxillus corrugatus Atk. On a dead pine log. Cow Bell Hollow. August 18, 1908, Dr. Bruce Fink.

Pleurotus petaloides Fries. On rotten wood. Cow Bell Hollow.

Psathyrella disseminata Pers. ex Fries. On the ground by roadside. Cow Bell Hollow.

Russula crustosa Peck. On the ground under oaks. Berea College Campus.

R. foetens Pers. ex Fries. On the ground in woods. Cow Bell Hollow.

R. lactea Pers. ex Fries. On the ground under oaks. Berea College Campus.

DEPARTMENT OF BOTANY,

PENNSYLVANIA STATE COLLEGE.

BIBLIOGRAPHY AND NEW SPECIES OF PHILIPPINE FUNGI¹

PAUL W. GRAFF²

In 1906, Ricker,³ of the United States Department of Agriculture, in his article entitled, "A List of Known Philippine Fungi," appended a bibliography which, while lacking in titles by about one third, was still of interest to one interested in that locality. Since that date the number of articles on the region has greatly increased and the numbers of types of both genera and species is so large that this paper is published with the hope that it may be an aid to those interested in the fungi of the Pacific islands, especially the Philippines and their neighbors. It has been the endeavor to include in this enumeration all publications on Philippine fungi, so far as the writer has been able to locate them, appearing prior to January, 1916. In the short note under each title will be found a list of such species as are described as new; the name given being that used by the author of each paper. This is deemed more useful than to endeavor to make them conform to any one system of classification. Practically all of these references may now be found in the library of the Bureau of Science at Manila.

1820

EHRENBERG, C. G. Fungos a viro clarissimo Adelberto de Chamisso de Boncourt, sub auspiciis Romanzoffianis in itinere circa terrarum globum collectos, in Nees ab Essenbeck's Horae Physicae Berolinenses, pp. 79-104, *pl.* 17-20, *fig.* 1-17.

On the visit of the Romanzoff Expedition to the Philippines with Chamisso as botanist a number of plants were collected but among them only one fungus is reported. This is described as

¹ Published with the permission of the Director of the Bureau of Science, Manila, P. I.

² Contribution from the Botanical Section of the Biological Laboratory, Bureau of Science, Manila, P. I.

³ Philip. Journ. Sci. 1: Suppl. 277-294.

a new species, *Sphaeria eschscholzii*, and figured in plate 18, fig. 8. The species is a *Daldinia* and closely related to *D. concentrica*. It has since been collected in these islands and reported by Rehm as *Daldinia eschscholzii*. This is the first report of any fungous collection having been made in the Philippines.

1830

NEES VON ESSENBECK, C. J. Fungi, in Presl's Reliquias Haenkeanae, p. 1-2.

In March, 1792, Thaddeus Haenke reached Manila in his travels, begun in 1789, and remained in the Islands about six months. He visited the provinces of Bulacan, Ilocos, Pampanga, Sorsogon, Cavite and Mindanao, making some considerable collection of the island flora. The fungi of his entire travels, however, number but three species which were identified by Nees von Essenbeck. But one of these, *Polyporus sanguineus* Fr., is reported as having been collected in Luzon.

1837

BLANCO, P. Fr. Manuel, Flora de Filipinas, pp. 845-846.

This work makes almost no mention of fungi. After mentioning the fact that there are numerous species of Agarics to be found in the Islands, the name of one fungus is given. This is cited as *Sclerotium subteraneum*, but is in reality a species of *Xylaria*; probably *Xylaria nigripes* (Klotz.) Sacc., an interesting species cultivated by the termites in their underground nests and used by them as food.

1842

BERKELEY, M. J. Enumeration of Fungi Collected by H. Cuming Esq., F. L. S. in the Philippine Islands. Lond. Journ. Bot. 1: 142-157, pl. 6, 7.

The second reported collection of fungi of any importance to be made in these islands was that of Cuming made during the years 1836 and 1840, and, on being sent to England, were determined by Berkeley who published their descriptions in 1842. Meyen made a collection in 1831 but his "Observationes" were not published until 1843. This present list of Cuming's material gives a total of thirty-five species, all Basidiomycetes with the

exception of five belonging to the Ascomycetes. Of this list twenty-three are described as new species. These are cited as follows:

Agaricus (Psalliota) *philippinensis*, *Lentinus connatus*, *Panus badius*, *Lenzites pallida*, *L. acuta*, *Polyporus* (Mesopus) *cumingii*, *P.* (Pleuropus) *grammocephalus*, *P.* (Pleuropus) *philippinensis*, *P.* (Apus) *elongatus*, *P.* (Apus) *intybaceus*, *Trametes versatilis*, *T. badia*, *Dacdalea inconcuma*, *D. tenuis*, *Stereum perlatum*, *Corticium hydnatinum*, *Clavaria serculus*, *Sphaeria* (Cordyceps) *pileiformis*, *S.* (Caespitosae) *examinans*, *S.* (Pertusae) *micraspira*, *Tulostoma pusillum*, and *Dichonema erectum*.

MONTAGNE, CAMILLE. *Plantes Cellulaires Exotiques Nouvelles*, Dec. V-VIII. Ann. Sci. Nat. Bot. II. 18: 241-282.

One species is described as new; *Polyporus* (Apus) *perennis* *ochreo-laccatus*, collected by Cuming and which was omitted by Berkeley from his descriptions of Cuming's collection.

1843

KLOTZSCH, J. F. Fungi, in F. J. F. Meyen's *Observationes Botanicae*. Nov. Act. Acad. Caes. Nat. Cur. 19, Suppl. 1: 233-246.

Meyen's collections were made while on a journey around the world between 1830 and 1832. The expedition visited Manila from September 16 to October 15, 1831, between two stops in China. The small collection of nine specimens was the first of any consequence made in the Islands; the only other collections from here being Chamisso's, Blanco's and Haenke's single specimens previously noted. While Berkeley published his enumeration of Cuming's material prior to this the actual collecting was done about six years later. Of the nine species from the Philippines six are described as new: *Hexagona ciliata*, *Polyporus meyenii*, *Stereum spectabile*, *Dictyophora speciosa*, and *Actinostroma* as a new genus with *A. infundibuliforme* and *A. crassum*. In his same volume Meyen mentions eighteen Philippine lichens collected in the vicinity of Manila, four of which he describes as new species.

1844

BERKELEY, M. J. *Decades of Fungi*. Lond. Journ. Bot. 3: 185-194, pl. 5, 6.

In this article Berkeley gives six additional numbers from Cuming's collection of Philippine plants omitted from his previously mentioned article. Of these five are Basidiomycetes and one an Ascomycetë. Three of the Basidiomycetes are described as new species. These include *Polyporus* (*Pleuropus*) *brunneolus*, *P. (Apus) tostus*, and *Hydnum webii*.

LÉVEILLÉ, J. H. Champignons Exotiques. Ann. Sci. Nat. Bot. III. 2: 167-221.

Of the 210 species of Basidiomycetes mentioned from the tropical Pacific in this article twelve are from the Philippines and all but three of these are described as new species. The new species are described under the following names:

Agaricus (*Pleuropus*) *noctilucens*, *Lenzites platypoda*, *Polyporus microloma*, *Trametes dermatodes*, *T. incana*, *Favolus fibrillosus*, *Thelephora* (*Mesopus*) *paradoxa*, *Stereum adustum* and *Cladoderis blumei*.

Most of this material was collected on the voyage of the Bonite between 1836 and 1837, by Gaudichaud-Beaupré, and is in the herbarium of the Paris Museum.

BLANCO, P. Fr. Manuel. Flora de Filipinas, Ed. II, pp. 583-584.

There are no additions to the fungus flora of the Islands in this edition. The description of *Sclerotium subterraneum* and the general statement regarding *Agarics* remains unrevised.

1845

LÉVEILLÉ, J. H. Champignons Exotiques. Ann. Sci. Nat. Bot. III. 3: 61-67.

But one species is mentioned from the Philippines in this paper. This was collected by Cuming in the vicinity of Manila and is described as *Chaetomium cumingii*, a new species related to *C. amphitricha* Corda.

1846

LÉVEILLÉ, J. H. "Champignon," in Gaudichaud-Beaupré's Voyage de la Bonite I: 164-204.

The voyage of the Bonite took place in the years 1836-1837, with Gaudichaud-Beaupré as botanist of the expedition. A considerable amount of botanical material was collected by him

throughout the tropics. The fungi of this expedition were determined by Lévillé, who published diagnoses of several new species in a previously cited article.⁴ This publication contains a list of ten fungi which were collected during the stay at Manila. All of these are previously described species. In the same volume of the "Voyage" are published the "Algae" and "Lichens" by Montagne, in which he mentions three lichens from the vicinity of Manila.

1851

CALZADO, P. Fr. Antonio L. A. Fragmentos de Algunas Plantas de Filipinas, pp. 115-116.

This little publication contains notes on a number of plants not included by Blanco in his "Flora de Filipinas." Nine species of Basidiomycetes are listed and followed by the statement that, "Hay otras muchas especies y variedades de hongos que seria largo enumerar." One of the nine species, *Merulius conicus*, is described as a new species. This, from the meagre Spanish description accompanying it, one would be inclined to place as a *Coprinus*.

1862

CURTIS, M. A. and BERKELEY, M. J. "Fungi," in the Wilkes United States Exploring Expedition 17: 195-202.

As far as fungi are concerned, this paper makes almost no mention of the Philippines. But one species, *Polyporus brunneolus* Berk., is given as having been collected in the Islands.

1878

BERKELEY, M. J. Enumeration of the Fungi collected during the Expedition of H. M. S. "Challenger," 1874-1875. (Third Notice.) Journ. Linn. Soc. Bot. 16: 38-54.

These fungi were collected in the southern part of the Archipelago, from Camiguin, Malanipa, and Malamon, between January 30th and February 4, 1875. There are here listed thirty Philippine species of which twenty-nine are Basidiomycetes and one an Ascomycete. Two numbers from "Little Ke" are in-

⁴ Ann. Sci. Nat. Bot. III, 3 (1844) 167-221.

cluded in this list by mistake. Ten new species and one new variety are described including:

Lentinus abnormis, *Polyporus* (Anodermi) *laeticolor*, *P.* (Anodermei) *ostreaeformis*, *P.* (Placodermei) *zonalis* Fr. var. *semilaccatus*, *P.* (Placodermei) *caliginosus*, *P.* (Placodermei) *endothejus*, *Trametes conchatus*, *Hexagona albida*, *H. flabelliformis*, *H. cladophora*, *Stereum moselli*.

1879

BLANCO, P. Fr. Manuel. Flora de Filipinas, Ed. III. 3: 265-266.

In this enlarged edition of his work, Blanco makes no revision in that portion in which he deals with the fungi. While he claims there are many in the Islands, he confines all his studies to the flowering plants.

1889

PATOUILLARD, N. La Genere Ganoderma. Bull. Soc. Myc. Fr. 5: 64-80, pl. 10, 11.

Forty-eight species of Ganoderma are enumerated in this article, of which seven are described as new. Two species, neither of which are new, are cited as from the Philippines; *Ganoderma ochrolaccatum* and *G. amboinense*.

1892

MAGNUS, P. Ueber eine neue Epichloë aus dem ostindischen Archipelago. Atti Congr. Bot. Intern., pl. 8.

This article devotes several pages to the discussion and description of a new species of Epichloë (*E. warburgiana*). This fungus was collected by Warburg at Cabongenam, Luzon, during the year 1888, as a parasite in the inflorescence of *Clinogyne* sp., and sent to Magnus for determination.

1893

DE BERARD, Rapport sur un maladie des Cafeiers aux iles Philippines. Bull. Minist. Agr. (Paris) 8: 1008-1024.

This report discusses the very common disease of the coffee plant caused by the fungus *Hemileia vastatrix* Berk. & Br., and considers its spread and the damage caused by this blight in the Philippines.

HENNINGS, P. Fungi Warburgiana. Hedwigia 32: 216-227.

In 1888 Dr. O. Warburg visited the Philippines during a journey which included among its stopping places localities in India, China, Korea, Japan, the Philippines, islands of the Malay and Bismark Archipelagos and Australia. This journey was taken between the years 1885 and 1889 and during it considerable collections were made in all groups of plants. Each group being assigned to a specialist, Hennings undertook the determination of the fungi and with a small amount of additional material from other sources, published a list of thirty-one species from the Philippines. This list contains five fewer names than appear later in his list in Warburg's "Monsunia" but contains three, *Lachnocladium* sp?, *Polystictus sanguineus* (L.) Mey., and *P. flabelliformis* Klotz., which are not published there. There appears but one new species, *Xylaria* (*Thamnomycetes*) *luzonensis*.

1899

MASSEE, GEORGE. Fungi Exotici, II. Kew Bull. Miscel. Inf. pp. 164-185.

In this article which enumerates a considerable number of fungi from the tropics, chiefly Asiatic, there are listed nine species collected by Loher in Luzon, mostly from the vicinity of Manila. Among these is but one, *Favolus purpureus*, which is described as new.

1900

DELACROIX, E. G. Les maladies et les ennemis des Caféiers, p. 42.

In this treatise on coffee diseases the author reports *Hemileia vastatrix* on both *Coffea arabica* and *C. liberica* in the Philippines.

HENNINGS, P. Fungi, in Warburg's Monsunia 1: 1-38.

Thirty-six fungi are listed from the Philippines, the greater number of which were collected by Warburg in 1888. Of the lot but six are described as new species: *Aecidium luzoniense*, *Nectria* (*Plaenectria*) *manilensis*, *Ustilaginoidea ochracea*, *Aschersonia cinnabarina*, *A. confluens*, and *Fusarium paspalicola*. These six new species as well as *Pilocratera hindsii* (Berk.) P. Henn., and *P. tricholoma* (Mont.) P. Henn., did not

appear in the previous list of Warburg's material published by Hennings in Hedwigia.

1903

SYDOW, H. and P. Neue und kritische Uredineen. Ann. Myc. 1: 324-334.

Among a number of new species of Uredineae described is one, *Uromyces deeringiae*, from the Philippines. It is probable that this is a hitherto unpublished species from Warburg's collection.

1904

THAXTER, ROLAND. Notes on the Myxobacteriaceae. Bot. Gaz. 37: 405-416.

Among several pages of remarks on this interesting group of plants, in which some eight new species from various localities are described, one collection from the Philippines is recorded. This species, *Chondromyces aurantiacus* (B. & C.) Thaxt., was collected in the Islands by Mr. Reade and communicated by him to the author.

1905

COPELAND, E. B. Fungi Esculentos Philippinenses. Ann. Myc. 3: 25-29.

Diagnoses of twenty-one species of Basidiomycetes are published under the following names:

Lycoperdon todayense, *Coprinus confertus*, *C. ater*, *C. ornatus*, *C. bryanti*, *C. concolor*, *C. volutus*, *C. revolutus*, *C. rimosus*, *C. pseudo-plicatus*, *Panaeolus pseudopapilionaceus*, *P. panaiensis*, *Agaricus* (Psalliota) *boltoni*, *A.* (Ps.) *merrillii*, *A.* (Ps.) *argyrostectus*, *A.* (Ps.) *manilensis*, *A.* (Ps.) *perfuscus*, *Lepiota chlorospora*, *L. candida*, *L. manilensis*, and *L. elata*.

COPELAND, E. B. New Species of Edible Philippine Fungi. Gov't Lab. Publ. 28: 141-146, 3 pl.

An English translation of the preceding paper in which the diagnoses appeared in latin.

USTERI, A. Beitrage zur Kenntnis der Philippinen und ihrer Vegetation, etc. Inag. Diss. Ph. D. Zurich, p. 136.

Contains a list of sixteen fungi from the island of Negros. All belong to the Hymenomycetes and were sent to Hennings for determination. There are no new species enumerated and the list only includes common tropical forms.

1906

MASSEE, GEORGE. Revision of the Genus *Hemileia*, Berk. Kew Bull. Miscel. Inf. pp. 35-42.

In the portion of this article covering *Hemileia vastatrix*, the fungus is reported from the Philippines on *Coffea arabica* and *C. liberica*.

SYDOW, H. and P. Neue und kritische Uredineen, IV. Ann. Myc. 4: 28-32.

In this short paper, in which are described new species of Uredineae from various parts of the world, five are described as new from the Philippines. These include the following:

Uromyces hewittiae on *Hewittia bicolor*, *Uredo davaoënsis* on *Cyanotidis* sp., *U. hygrophilae* on *Hygrophila salicifolia*, *U. philippinensis* on *Cyperus polystachyus* and *U. wedeliae-biflorae* on *Wedelia biflora*.

RICKER, P. L. A List of Known Philippine Fungi. Philip. Journ. Sci. 1: Suppl. 227-294.

In this article the author attempts to bring together in a single list all species so far credited to the Archipelago, adding a few names from the determination of a collection of sixty numbers sent him from the Islands. There are but five new species described in the list of 156 fungi: *Phyllachora merrillii*, *Nummularia philippinensis*, *Trematosphaeria palaquii*, *Stereum luzonense* and *Thelephora diamesa*. At the end is appended a bibliography of sixteen references.

SYDOW, H. and P. Novae Fungorum Species, III. Ann. Myc. 4: 343-345.

Auerswaldia copelandi collected on leaves on *Caryota* sp., in the vicinity of Zamboanga, Mindanao, is described as new. It is the only species cited in this article from the Philippines.

1907

MASSEE, GEORGE. Philippine Myxogastres. Philip. Journ. Sci. Bot. 2: 113-115.

Of the eighteen species listed none prove to be new but are, for the most part, very cosmopolitan. Nine genera are represented in this small collection and are from various provinces of the Archipelago. This is the first reported collection of species from this group of the fungi known from the Philippines.

MURRILL, W. A. Some Philippine Polyporaceae. Bull. Torr. Bot. Club 34: 465-481.

This article gives a considerable addition to the known species of Polypores from these islands. There are included collections made by Mr. R. S. Williams, mainly on the slopes of Mount Mariveles in Bataan Province, and by Mr. E. D. Merrill and Mr. A. D. E. Elmer in Luzon, Mindoro, Leyte, Culion, Palawan and Mindanao. Of the sixty-seven species listed, twenty-four are described as new species and nineteen are made new combinations. The nomenclature of a number of these species has been revised by Bresadola in later papers to bring them in accord with the "Vienna Code." The following is the list of species published as new:

Coriolus cuneatiformis, *Funalia philippinensis*, *Hapalopilus subrubidus*, *Inonotus elmerianus*, *Microporellus subdealbatus*, *Polyporus coracinus*, *P. palensis*, *Spongipellis luzonensis*, *Trametes caespitosa*, *T. lamaensis*, *T. luzonensis*, *T. subacuta*, *T. williamsii*, *Tyromyces elmeri*, *Amauroderma elmerianum*, *Elfvigia elmeri*, *Fomes luzonensis*, *F. philippinensis*, *Ganoderma subtornatum*, *G. williamsianum*, *Pyropolyporus lamaensis*, *P. merrillii*, *P. williamsii*, and *Gloeophyllum edule*.

REHM, H. Ascomycetes Novi. Ann. Myc. 5: 516-546.

In this article, which includes descriptions of new species of fungi from various parts of the world, a single species, *Mollisia* (*Pseudotapesia*) *copelandi*, is described from the Philippines. The fungus was collected on leaves of *Caryota* sp. at Zamboanga, Mindanao and communicated to Rehm for identification.

1908

MURRILL, W. A. A Collection of Philippine Polypores. Leaf. Philip. Bot. 1: 262-271.

In this paper thirty-six species are enumerated. They were collected in three localities, Mount Mariveles in Bataan Province, Mount Banajao in Laguna Province and in Tayabas Province, in Luzon and at Palo in Leyte, by Mr. A. D. E. Elmer. No new species are described but a number of these were described as new in an article by the same author appearing in the Bull. Torr. Bot. Club of the previous year.

COPELAND, E. B. Bud Rot of the Cocoanut. Philip. Agrl. Rev. 1: 210-220.

This paper is a report of personal investigation of an attack of the Bud Rot disease in the cocoanut region of Laguna and Tayabas Provinces. Whether it is the West Indian bacterial disease or the *Pythium* disease, reported by Butler as being the cause of the trouble in India, was not ascertained.

ROBINSON, C. B. Sugar-cane Smut. *Phil. Agr. Rev.* 1: 295-297.

The investigation of an attack of *Ustilago sacchari*, on sugar-cane in the Province of Laguna in Luzon, is reported in this article and suggestions given for the prevention of the trouble in the Islands.

HENNINGS, P. Fungi Philippinenses. *Hedwigia* 47: 250-265.

Of the 112 species published in this paper, sixty-two or more than half are described as new species. The greater number of these were collected by E. D. Merrill with a less number by Foxworthy, Whitford and Mrs. Clemens. As to locality, the islands of Luzon, Mindoro, Panay, Samar and Mindanao are represented. The specimens are distributed among the following groups: Five belonging to the Ustilagineae, twenty-one to the Uredineae, sixty-two to the Ascomyceteae and twenty-four to the Deuteromyceteae. One new genus is described, *Merrillopeltis* with *M. calami* as the type. The new species described include:

Contractia merrillii, *C. cyperi-polystachyi*, *Puccinia merrillii*, *Coleosporium merrillii*, *Uredo anthraxonis-ciliaris*, *U. castaneae*, *U. knoxiae*, *U. abri*, *Aecidium plucheae*, *A. blumeae*, *A. uvariae-rufae*, *Dimerosporium mindanaense*, *Calonectria copelandii*, *Hypocrella schizostachyi*, *Phyllachora fici-minahassae*, *P. canarii*, *P. ardisiae*, *P. macarangae*, *P. pongamiae*, *P. luzonensis*, *P. parkiae*, *Auerswaldia merrillii*, *A. derridis*, *Scirrhia luzonensis*, *Roumegueria ichnanthi*, *Rosellinia cocoë*s, *R. bambusae*, *Apiospora luzonensis*, *Physalospora ramosii*, *Ophiobolus nipae*, *O. livistonae*, *Gibberidea nipae*, *Julella luzonensis*, *Endoxyla mangiferae*, *Diatrype mindanaensis*, *Hypoxylon hibisci*, *H. nucigenum*, *H. apoë*nse, *Xylaria copelandii*, *X. bataanensis*, *Asterina derridis*, *Lembosia dipterocarpi*, *Parmularia hymenolepidis*, *Hysterium hoyae*, *Trybli-diella mindanaensis*, *Merrillopeltis calami*, *Rhytisma viburni*, *R. lagerstromiae*, *Leptopeziza mindanaensis*, *Phyllosticta acoridii*, *Placosphaeria merrillii*, *P. tiglii*, *Sphaeropsis pandani*, *Coniothyrium coffeae*, *C. gmelinae*, *C. oroxyli*, *Diplodia gmelinae*, *D. hibisci*, *D. fructus-pandani*, *Brachysporium pini-insularis*, *Cercospora tiglii*, *Sporocybe philippinensis*.

HENNINGS, P. Fungi Philippinenses. Philip. Journ. Sci. Bot. 3: 41-58.

This article is a repetition of the one published by him in Hedwigia a month prior and aside from listing 112 species instead of 110 and describing one other new species, *Cercospora helminthostachydis*, the papers are identical.

MURRILL, W. A. Additional Philippine Fungi. Bull. Torr. Bot. Club 35: 391-416.

This paper includes determinations of a considerable number of species sent to the New York Botanical Garden for that purpose in the early part of the year. The material was collected in various parts of the Archipelago by E. D. Merrill, A. D. E. Elmer, H. N. Whitford, Mrs. Mary S. Clemens, and others. Ninety-eight species are listed, forming a very material addition to the fungus flora of the Islands, from various parts of the island of Luzon, from Mindoro, Negros, Panay, Balabac, Mindanao and the Babuyan. Of these thirty-eight species are described as new. One new genus, *Whitfordia*, is described, with *W. warburgiana* (P. Henn.) as the type. The following includes the names of the new species as published:

Coltricia benguetensis, *Corioloopsis copelandi*, *C. bataanensis*, *C. melleoflavus*, *C. subcrocata*, *Coriolus clemensiae*, *C. currani*, *C. perpusillus*, *C. rubritinctus*, *C. subvernicipes*, *Cycloporellus barbatus*, *Favolus resinosus*, *F. subrigidus*, *Hapalopilus ramosii*, *Hexagona luzonensis*, *H. pertenuis*, *Inonotus clemensiae*, *Trametes conglobata*, *T. insularis*, *Tyromyces merrittii*, *T. subchioneus*, *T. unguliformis*, *Whitfordia warburgiana*, *Amauroderma asperulatum*, *A. bataanense*, *A. clemensiae*, *A. ramosii*, *Fomes subresinosus*, *F. subungulatus*, *Ganoderma balabacense*, *G. currani*, *Pyropolyporus subextensus*, *P. tenuissimus*, *P. tricolor*, *Dacdalea isabellina*, *D. subconfragosa*, *Gloeophyllum nigrozonatum*, *Lenzites clemensiae*, and *L. submurina*.

1910

SYDOW, H. and P. Fungi novi Philippinenses. Ann Myc. 8: 36-41.

This short article is composed entirely of descriptions of new species. Twenty-two species are included the greater part of which were collected by E. D. Merrill. All belong to the Micromycetes and comprise the following:

Puccinia mesomorpha, *Uredo manilensis*, *Meliola hyptidis*, *Valsella pinangae*, *Rosellinia procera*, *Nummularia gracilentia*, *Hypoxyylon minutellum*, *H.*

lilliputianum, *Xylaria gracilentia*, *Phyllachora aggregatula*, *P. circinata*, *P. lepida*, *Homostegia fusispora*, *Hypocrella botryosa*, *Scynesia scutellum*, *Lembosia congregata*, *Mollisia ravidia*, *Bulgaria pusilla*, *Cytospora calami*, *C. lirella*, *Melasmia exigua* and *Septogloeum aureum*.

SYDOW, H. and P. Fungi Philippinenses. Philip. Journ. Sci. Bot. 5: 163-166.

Forty-nine species of fungi belonging to various groups are listed in this article. No new species are described. Of this number sixteen have already been mentioned as from the Philippines in the preceding paper by the same author where they were described as new species.

1911

LISTER, ARTHUR. A Monograph of the Mycetoza. Ed. II, pp. 1-302, pl. 1-200.

Sixteen of the species and one variety are mentioned as being found in the Philippines. The specimens cited are to be found in the herbarium of the British Museum and belong to the material previously listed by Masee in 1907 in the Philip. Journ. Sci. Bot. 2: 113-115. The nomenclature has been changed and but three are to be found under the names previously cited.

ROBINSON, C. B. Corn Leaf-Blight in the Philippines. Philip. Agrl. Rev. 4: 356-358.

The leaf-blight of corn caused by *Helminthosporium turcicum* Pass., is reported from the Mountain Province on "Mexican June" but as *H. inconspicuum* C. & E. The disease was not imported with the seed as this was the third generation grown in the Islands and neither of the two preceding showed any signs of the malady. The same fungus has been reported as doing considerable harm to the corn crop in Japan.

SYDOW, H. and P. Notes and Descriptions of Philippine Fungi, I. Leaff. Philip. Bot. 4: 1153-1159.

In this article notes and descriptions of twenty-two species collected in various parts of the Archipelago by A. D. E. Elmer are given. Of these the following eleven are described as new:

Pseudomeliola placida, *Stigmatea bullata*, *Asterina escharoides*, *A. diaphana*, *A. elaeocarpi*, *A. elmeri*, *Phyllachora glochidii*, *P. elmeri*, *P. apoënsis*, *Darwinella orbicula*, and *Placosphaeria durionis*.

SYDOW, H. and P. Novae Fungorum Species, VI. Ann. Myc. 9: 142-146.

Of this collection of fifteen fungi, mostly tropical, four new species are described from the Philippines. These include *Me-lampsora cingens* on *Bridekia* sp., *Ustilago flagellata* on *Rottboellia exaltata*, *Peroneutypella cocoës* on *Cocos nucifera*, and *Rosclinia dolichospora* on *Phragmites karkae*.

BRESADOLA, J. Basidiomycetes Philippinenses. Hedwigia 51: 306-326.

The greater portion of this paper is devoted to the polyporaceous fungi. There are 102 species included of which eleven are described as new. One new genus, *Elmerina* with *Hexagonia cladophora* Berk., as the type, is described. *Hexagonia vespacea* Pers., is also transferred to this new genus. The new species include *Lentinus elmeri*, *Cantharellus merrillii*, *Volvaria esculentia*, *Fomes pachydermus*, *Polystictus umbrinus*, *Poria straminea*, *P. tricolor*, *Daedalea gilvidula*, *Thelephora nigrescens*, *Cyathus elmeri* and *Cauloglossum saccatum*. These fungi were, to a large extent, collected by E. D. Merrill and A. D. E. Elmer in Mindanao, Negros and Mindoro.

SYDOW, H. and P. Fungi from the Island of Palawan. Leaflet. Philip. Bot. 5: 1533-1547.

The twenty-nine species of this list were collected at Puerto Princessa and Brooks' Point, Palawan by A. D. E. Elmer. Of these, twenty-four, or nearly five-sixths, are described as new species. These include:

Puccinia leochroma, *Dimerium scabrosum*, *Nematothecium vinosum*, *Meliola aliena*, *M. confragosa*, *M. diplochaeta*, *M. elmeri*, *M. laevigata*, *M. macrochaeta*, *M. patens*, *M. palawanensis*, *Asterina decipiens*, *A. irregularis*, *A. lobata*, *A. porriginosa*, *A. trachycarpa*, *A. transversalis*, *Micropeltis aequalis*, *Laestadia festiva*, *Anthostomella elmeri*, *Acrospermum latissimum*, *Calonectria limpida*, *Vermicularia pandani* and *Discosiella cylindrospora*. Two new genera are described, *Nematothecium*, with *N. vinosum*, and *Dioscosiella*, with *D. cylindrospora*, as the type.

1912

SYDOW, H. and P. Novae Fungorum species, VII. Ann. Myc. 10: 77-85.

Eight new species from the Philippines are described, seven

from the vicinity of Manila and one from Bontoc Subprovince, Luzon, as follows: *Ustilago isachnes*, *U. manilensis*, *U. rosulata*, *Tolyposporium philippinense*, *Puccinia citrata*, *Meliola gymnosporiae*, *M. tamarindi*, and *M. callicarpae*.

SYDOW, H. and P. Fungi Exotici Exsiccati, Fasc. I. Ann. Myc. 10: 351-352.

This published list of the fungi distributed in Fascicle I of this series includes fifteen Philippine numbers, five of which are types of new species. The types are as follows: *Meliola tamarindi*, *Mycosphaerella alocasiae*, *Gloeosporium graffii*, *Cercospora pumila*, and *Heterosporium coryphae*.

BRESADOLA, J. Basidiomycetes Philippinenses, II. Hedwigia 53: 46-80.

Of the 168 species listed in this paper there is but one described as the type of a new genus, three as new species and two new varieties. The genus *Copelandia* is described as new with *Agaricus papilionaceus* Bull., as the type. The new species include *Cantharellus philippinensis*, *Fomes mcgregori* and *Polystrictus melanospilus* and the varieties, *Polyporus atypus* Lév., var. *exeratus*, and *Fomes spacideus* (Berk.) Cooke var. *halconensis*. The list represents general collecting from all parts of the Islands and while mostly Polypores other divisions of the Basidiomycetes are represented.

SYDOW, P. and H. Monographia Uredinearum 3: 80.

One new species of Philippine rust is described, *Hamaspora acutissima*, on *Rubus rolfii*. This fungus had previously been collected in Australia and Java but was reported under the name of *Hamaspora longissima* from which it, however, differs sufficiently, according to Sydow, to warrant specific distinction.

1913

BROWN, W. H. and GRAFF, P. W. Factors Influencing Fungus Succession on Dung Cultures. Philip. Journ. Sci. Bot. 8: 21-29.

In this article it is concluded that the succession of fungus life on dung cultures is due to the action of microorganisms rather

than toxins and that this may possibly be a clue to the cause of the succession of higher plants in a given locality. Four species of fungi are mentioned which had not previously been reported from the Islands: *Absidia caerulea* Bain., *Mucor racemosa* Fres., *Coprinus stercorarius* Fr., and *C. plicatilis* Fr.

SYDOW, H. and P. Novae Fungorum Species, IX. Ann. Myc. **11**: 54-65.

In this article which deals mostly with species from Japan and Formosa there are a few from the Caucasus and German East Africa and two new species described from the Philippines. These are *Linospora pandani* on leaves of *Pandanus* sp., and *Gloeosporium catechu* on dead fruits of *Areca catechu*.

REHM, H. Ascomycetes Exsiccati, Fasc. 52. Ann. Myc. **11**: 166-171.

In this fascicle, containing Nos. 2026 to 2050 of Rehm's exsiccati, are distributed two numbers from the Philippines neither of which are new. This is the first Philippine material sent out by Rehm in these sets. The two species are *Sphaerulina smilacincola* Rehm and *Phyllachora pahudiae* Syd., collected in Laguna Province, Luzon.

SYDOW, H. and P. Fungi Exotici Exsiccati, Fasc. II and III. Ann. Myc. **11**: 207-208.

In this list of specimens distributed in Fascicles II and III of this series are included twenty Philippine species. The material of six of these numbers is cotype of new species. These include the following: *Dimerina graffii*, *Meliola pulcherrima*, *Mycosphaerella roureae*, *Asterina cassiae*, *Hysterostomella psychotriae*, and *Gloeosporium canavaliae*.

REHM, H. Ascomycetes Philippinenses Collecti a Clar. C. F. Baker. Philip. Journ. Sci. Bot. **8**: 181-194.

There are enumerated in this article forty-seven species. Twenty of these are described as new and one as a new variety. All were collected either at Los Baños, Province of Laguna, or on Mount Maquiling in the vicinity. *Trichosphaeria regulinoides* Sacc., var. *arengae* is described as a new variety. The following are described as new species:

Meliola cylindrophora, *M. quadrifurcata*, *Ophionectria erinacea*, *Phyllachora atrofigurans*, *Guignardia freycinetia*, *Sphaerulina smilacincola*, *Didymosphaeria minutelloides*, *Merrilliopectis hoeckelii*, *Ceratospheeria philippinarum*, *Nummularia urceolata*, *Hypoxylon disjunctum*, *H. fulvo-ochraceum*, *Diatrype megale*, *Seynesia clavisporea*, *Lembosia pothoidei*, *Ombrophila sanguinea*, *Humaria raimundoi*, and *Lachnea albo-grisea*.

SYDOW, H. and P. Descriptions of Some New Philippine Fungi. Philip. Journ. Sci. Bot. 8: 195-196.

This short paper gives descriptions of five new species of fungi under the following names: *Puccinia paullula*, *Mycosphaerella alocasiae*, *Gloeosporium graffii*, *Cercospora pumila* and *Heterosporium coryphae*. Cotype material of the last four was distributed in Sydow's "Fungi Exotici Exsiccati, Fasc. I."

SYDOW, H. and P. Novae Fungorum Species, X. Ann. Myc. 11: 254-271.

Of the thirty new species of fungi described in this article seven form the types of new genera. Eight of the descriptions are accompanied by text figures. The new Philippine species number thirteen and are as follows:

Graphiola cylindrospora, *Meliola pulcherrima* (fig.), *M. arborescens* (fig.), *Aithaloderma clavatisporum* (fig.), *Physalospora hoyae*, *Phyllachora schoenicola*, *Schizochora elmeri* (fig.), *Cyclodothis pulchella* (fig.), *Diedickeia singularis* (fig.), *Gloeosporium hoyae*, *Coniosporium extremorum*, *Cercospora stizobii*, and *C. subtorulosa*.

Aithaloderma, *Schizochora*, *Cyclodothis* and *Diedickeia* are described as new genera of which the types are Philippine species listed above. A larger portion of the remaining species described in the article are from Japan and hence, from the nearness of the two localities, of considerable interest to one interested in the Philippines or their vicinity.

REHM, H. Ascomycetes Philippinenses, II. Philip. Journ. Sci. Bot. 8: 251-263.

In this article forty-six species of Ascomycetes are listed together with descriptions of seventeen new species. The specimens enumerated were collected in the vicinity of Los Baños, Province of Laguna, Luzon. Those which are described as new include:

Meliola uvariae, *M. acalyphae*, *M. merremiae*, *M. hewittiae*, *Dimerium pseudo-perisporioides*, *Microthyrium elatum*, *Micropeltis corruscans*, *Stigmaea cinereomaculans*, *Leptosphaeria ambiens*, *Cryptosphaeria philippinensis*, *Valsaria consors*, *Botryosphaeria bakeri*, *Daldinia luzonensis*, *Xylaria gigantochloae*, *Lembosia eugeniae*, *Haematomyces carneus*, *Ombrophila helotioides* and one new variety, *Anthostomella grandispora* Penz. & Sacc., var. *schizostachyi*.

SYDOW, H. and P. Enumeration of Fungi, with Notes and Descriptions of New Species, Part I: Mycomycetes. Philip. Journ. Sci. Bot. 8: 265-285.

Thirty-eight new species of Ascomycetes and Imperfecti are described among this list of 109 species enumerated from the Philippines. One new genus is described and formed by raising *Tephrosticta*, a subgenus of *Trichosporella*, to generic rank. The larger part of the fungous material was collected in the vicinity of Manila, on Mount Maquiling in Laguna Province and Mount Mariveles, Province of Bataan. The new species described in this enumeration include the following:

Microstroma philippinense, *Tilletia opaca*, *Puccinia philippinensis*, *Meliola intricata*, *Dimerina graffii*, *Dimerosporina pusilla*, *Mycosphaerella pericampyli*, *M. roureae*, *Pleosphaerulina phaseolina*, *Tephrosticta ficina*, *Ophiobolus seriatulus*, *Anthostomella calocarpa*, *Rosellinia lamprostoma*, *Amphisphaeria bambusina*, *Hypocrea degenerans*, *Hysterostomella psychotriae*, *Asterina cassiae*, *A. laxiuscula*, *Phyllachora afzeliae*, *P. dischidiae*, *P. pahudiae*, *P. roureae*, *P. lagunensis*, *P. sacchari-spontanei*, *Dothidea pterocarpi*, *Dothidella albizziae*, *Phyllosticta bakeri*, *Septoria bakeri*, *Lasmenia ficina*, *Ephelis caricina*, *Gloeosporium canavaliae*, *Colletotrichum euchronum*, *C. pandani*, *Cercospora gliricidiae*, *C. bakeri*, *C. biophyti*, *C. pantoleuca*, and *C. litseae-glutinosa*. Besides these, one new combination is made by the transfer of *Dothidella yapensis* P. Henn., to the genus *Phyllachora*.

SACCARDO, P. A. Notae Mycologicae. Ann. Myc. 11: 312-325.

There are included in this article the enumeration of sixteen species new to the Philippines. Among these are described two new genera, *Traversoa* with *T. excipuloides* as the type and *Stigmatomyces* with *S. bakeri* as type. Aside from these there are described eleven new species:

Phyllosticta siphonodontis, *P. graffiana*, *Macrophoma punctiformis*, *M. seriata*, *Traversoa dothielloides*, *Botryodiplodia anceps*, *Diplodia durionis*, *Coniosporium liniolatum*, *Podosporium gigasporum*, *Aspergillus periconioides* and *Stigmella manilensis*; and two new varieties; *Traversoa excipuloides* var. *distans*, and *Pestalozzia microspora* var. *philippinensis*. All the species enumerated in the article were collected on the island of Luzon.

SYDOW, H. and P. Fungi Exotici Exsiccati, Fasc. IV. Ann. Myc. **11**: 388.

In this list of fifty numbers, distributed as Fascicle IV of Sydow's exsiccati, nineteen are from the Philippines and of these one is cotype of a new genus and eight of new species. These include the following:

Aithaloderma clavatisporum nov. gen. and sp., *Microstroma philippinense*, *Anthostomella calocarpa*, *Phyllachora roureae*, *Gloeosporium lebbeck*, *Colletotrichum pandani*, *Aspergillus periconioides*, *Trichosporium olivatum*, and *Stigmella manilensis*.

SYDOW, H. and P. Notes and Descriptions of Philippine Fungi, II. Leaflet. Philip. Bot. **6**: 1919-1933.

There are included in this enumeration forty-five species collected by A. D. E. Elmer, mostly from the islands of Palawan and Mindanao. Fourteen of these are Basidiomycetes one of which, *Septobasidium molliusculum*, is described as a new species. Twenty-eight are Ascomycetes, among which are described two new genera, *Schizochora* with *S. elmeri* and *Cyclodothis* with *C. pulchella* as types, and thirteen additional new species.

The remaining three are listed as Fungi Imperfecti. Here one new genus is described, *Diedickeia* with *D. singularis* as the type, and *Marsonia pavonia* is described as a new species. The new Ascomycetes include:

Meliola acutisecta, *M. affinis*, *M. araneosa*, *M. arborescens*, *M. heterotricha*, *M. opaca*, *M. opposita*, *M. parvula*, *M. vilis*, *Asterina opposita*, *A. subinermis*, *Phyllachora oblongispora*, *Cyclodothis pulchella*, and *Acrospermum elmeri*.

REHM, H. Ascomycetes Exsiccati, Fasc. 53. Ann. Myc. **11**: 391-395.

In this fascicle, containing No. 2051 to 2075 of Rehm's exsiccati, are distributed eight species from the Philippines collected on the island of Luzon. None represent new species.

SYDOW, H. and P. Novae Fungorum Species, XI. Ann. Myc. **11**: 402-408.

In this article, in which are described eighteen new species of micromycetous fungi, eleven are from the Philippines. One new genus, *Micropeltella* with *M. clavisporea* as the type, is described from material collected on *Memecylon lanceolatum* from Pangasinan, Luzon. The other ten new species are as follows:

Aecidium banosense, *Mycosphaerella oculata*, *M. caricae*, *Venturia litseae*, *Microthyriella philippinensis*, *Macrophoma cyamopsidis*, *Gloeosporium alchorneae*, *Cercosporina barringtoniae* C. *carthami*, and *C. taccae*. These ten species were all collected in the vicinity of Los Baños, Province of Laguna, Luzon.

GRAFF, P. W. Additions to the Basidiomycetous Flora of the Philippines. Philip. Journ. Sci. Bot. 8: 299-307, pl. 8-10.

An enumeration of Philippine Basidiomycetes divided as follows; Tremellineae, two species one of which, *Exidia lagunensis*, is described as new; Polyporeae, eight species with one, *Laschia philippinensis*, described as new; Agaricineae, seven species with four, *Lentinus candidus*, *L. lagunensis*, *Volvaria pruinosa* and *Naucoria manilensis*, new; Gasteromyceteae, sixteen with one new species, *Bozista jonesii*. Of thirty-three species, seven are described as new and three of these, *Lentinus candidus*, *L. lagunensis* and *Volvaria pruinosa* are illustrated by plates.

REHM, H. Ascomycetes Philippinenses, III. Philip. Journ. Sci. Bot. 8: 391-405.

Fifty-two species are included in this enumeration, all from the island of Luzon. Of these, twenty-five are described as new:

Meliola sandorici, *M. sidae*, *M. maesae*, *M. telosmae*, *M. horrida*, *Myiocopron bakerianum*, *Micropeltis consimilis*, *M. applanata*, *Limacinula malloti*, *Lisea spatholobi*, *Auerswaldia decipiens*, *Phyllachora lagunae*, *P. pseudos*, *P. pterocarpi*, *P. valsiformis*, *Dothidella canarii*, *Anthostomella mindorensis*, *A. donacina*, *Apiospora coryphae*, *Hypoxydon coryphae*, *Metasphaeria maculans*, *Melanomma mindorensis*, *Lophodermium passiflorae*, *Coccomyces canarii* and *Biatorina sublutea*. Several new varieties are also included, as follows; *Micropeltis vagabunda* Speg. var. *calamincola*, *Apiospora curvispora* (Speg.) Rehm var. *rottboelliae*, *Stictis stellata* Wallr., var. *philippinensis*, *Psorotheciopsis decipiens* Rehm var. *bispora*, and *Humaria granulata* (Bull.) Quél., var. *microspora*.

REHM, H. Ascomycetes Philippinenses, IV. Leaf. Philip. Bot. 6: 1935-1947.

Of forty species which are enumerated here, thirteen are described as new. All were collected by C. F. Baker in the vicinity of Los Baños, Province of Laguna, Luzon. The new species include the following:

Nectriella philippina, *Rhopoglyphus blumeanus*, *Rosellinia fuscomaculans*, *Zignoella arengae*, *Rhynchostoma sanguineo-atrum*, *Didymosphaeria blumeae*, *Metasphaeria raimundoi*, *Amphisphaeria leucaenae*, *Eutypa macropunctata*,

Hypoxyylon lianincolum, *Vizella passiflorae*, *Micropeltis bauhiniae*, and *Scolecopeltis garciniae*. With the exception of two species belonging to the Discomycetes, all listed belong to the Pyrenomycetes.

SACCARDO, P. A. Notae Mycologicae. Ann. Myc. 11: 546-568.

Included in this article are notes and comments on twenty-five species of Philippine fungi gathered by several collectors in a number of localities on the island of Luzon. Among these one new genus is described, *Melanographium* with *M. spleniosporum* on *Bambusa blumeana* as the type. The remaining new species are twelve in number and include:

Cryptovalsa philippinensis, *Phoma sabdariffae*, *Phomopsis dioscoreae*, *Dothiorella crastophila*, *Haplosporella manilensis*, *Diplodia synedrellae*, *D. caricae*, *D. artocarpi*, *Botryodiplodia curta*, *Campsotrichum heterochaetum*, *Helminthosporium inversum*, and *Hymenula copelandi*.

1914

BAKER, C. F. The Lower Fungi of the Philippine Islands.

Leaflet. Philip. Bot. 6: 2065-2190.

This publication includes a very complete check-list of the micromycetous fungi reported from the Islands and, while many corrections must be made in a future work of the kind, it will undoubtedly prove of great assistance in any work on the subject. In it some 215 genera and 638 species are listed. A considerable percentage of these have been added to the known flora of the Archipelago but recently. Ricker, in 1906, reports but 71 genera and 156 species in all groups of fungi then known from the Philippines.

SYDOW, H. and P. Enumeration of Philippine Fungi with Notes and Descriptions of New Species, II. Philip. Journ. Sci. Bot. 8: 475-508.

This extensive enumeration of lower forms of Philippine fungi includes a list of 129 species, fifty of which are described as new. Four new genera are described under the following names: *Bulgariastrum*, *Calopeziza*, *Sirosphaera* and *Lasiothyrium*. The collectors were several and the fungi gathered in a number of localities throughout the Archipelago. The larger portion, however, were collected on the island of Luzon. The new species described include:

Puccinia erebia, *Uredo operculinae*, *U. nerviseda*, *Aecidium lagunense*, *Dimeriella cyathearum*, *Meliola mitragynes*, *M. merrillii*, *M. peregrina*, *M. perpusilla*, *M. pelliculosa*, *Guignardia creberrima*, *Hypospila ambigua*, *Merrilliopectis daemonoropsis*, *Anthostomella discophora*, *Rosellinia megalosperma*, *R. merrillii*, *Apiosporella aberrans*, *Diatrypella psidii*, *Micropeltella megasperma*, *Micropeltis semecarpi*, *Seynesia ipomoeae*, *Asterina pusilla*, *Asterinella obesa*, *A. lorantheri*, *A. luzonensis*, *A. lugubris*, *A. distinguenda*, *Trichothyrium orbiculare*, *Gibberella creberrima*, *Hypocrella melaena*, *Phyllachora phaseolina*, *P. rottoelliae*, *Discodothis lobata*, *Glonium bambusinum*, *Bulgariastrum caespitosum*, *Calopeziza mirabilis*, *Dasyascypha merrillii*, *Erinnella philippinensis*, *Phyllosticta manihoticola*, *Phomopsis bakeri*, *P. gliricidia*, *Sirospora botryosa*, *Leptothyrium circumcissum*, *Pycnothyrium lobatum*, *Lasiothyrium cycloschizon*, *Gloeosporium lebbeck*, *Cylindrosporium exiguum*, *Melanconium merrillii*, *Oospora obducens*, *Catenularia velutina*, *Cladosporium oplismeni*, and *Cereospora tabernaemontanae*.

THAXTER, ROLAND. Laboulbeniales Parasitic on Chrysomelidae.

Proc. Amer. Acad. Arts Sci. 50: 17-50.

Among thirty-four species of these curious and interesting fungi, all but three of which are described as new and nearly all of which were collected in tropical countries, are included three from the Philippines. Two of these *Laboulbenia philippina* on a chrysomelid near *Rhembastus* and *L. oedionychi* on *Oedionychus* sp., both collected by C. S. Banks in the vicinity of Manila, are described as new species. The other is a previously described species, *L. nodostomae*, and was collected on *Nodostoma* sp., on the island of Mindanao.

REHM, H. Ascomycetes Exsiccati, Fasc. 54 and 55. Ann. Myc. 12: 165-175.

Among these notes and descriptions of new species distributed in these fascicles, fourteen are enumerated from the Philippines. None of these are new species but are previously described and from the following genera: *Meliola* 5, *Didymosphaeria* 1, *Trichosphaeria* 1, *Paranectria* 1, *Merrilliopectis* 1, *Gillettiella* 1, *Asterina* 3, and *Calopeziza* 1.

SYDOW, H. and P. Novae Fungorum Species, XII. Ann. Myc. 12: 195-204.

Of the thirty-two new species described here, twenty-one are of Philippine origin. Among these is described one new genus, *Theissenula*, with *T. clavisporea* on *Schizostachyum acutiflorum* as the type. The other new species include:

Septobasidium minutulum, *Kuehneola garugae*, *Coleosporium exaci*, *Aecidium parile*, *Entyloma oryzae*, *Mycosphaerella brideliae*, *M. reyesi*, *Gnomonia litseae*, *Myiocopron conjunctum*, *Lophodermium rotundatum*, *Brachysporium bakeri*, *Cercospora alpiniae*, *C. artocarpi*, *C. bauhiniae*, *C. canavaliae*, *C. lagerstromiae*, *C. pachyderma*, *C. pahudiae*, *C. puerariae*, and *Sporodesmium bakeri*.

SYDOW, H. and P. Fungi Exotici Exsiccati, Fasc. V and VI. Ann. Myc. 12: 238-239.

In this list of a hundred numbers distributed in these two fascicles twenty-eight are from the Philippines. Of these the following: *Uredo operculinae*, *Meliola pelliculosa*, *Guignardia creberrima*, *Phyllachora sacchari-spontanei*, and *Asterina laxiuscula*, are cotype material of new species. Three numbers are cotype of new Philippine genera, as follows: *Diplochorella fertilissima* on *Xylopia aethiopica*, *Calopeziza mirabilis* on *Premna odorata*, and *Lasiothyrium cycloschizon* on *Aegiceras corniculatus*.

REHM, H. Ascomycetes Philippinenses, V. Leaflet. Philip. Bot. 6: 2191-2237.

Over one third of this enumeration of 130 species of Philippine Ascomycetes consists in the description of new ones. These, numbering fifty-four, are described under the following names:

Meliola callista, *M. uncariæ*, *Guignardia sterculiae*, *G. fuscocoriaceae*, *G. arengae*, *Anthostomella atronitens*, *A. copelandi*, *A. lichenoides*, *Rosellinia rachidis*, *Massarinula cordiae*, *Amphisphaeria clerodendri*, *A. coronata*, *Metasphaeria abundans*, *M. consociata*, *M. hibiscincola*, *M. gigantochloae*, *Herpotrichia philippinensis*, *Leptosphaeria simillima*, *Clypeosphaeria gigantochloae*, *Ustulina placentiformis*, *Nummularia papyracea*, *Poronia hypoxylodes*, *Xylaria bacillaris*, *Calosphaeria inconspicua*, *Eutypella premnæ*, *Eutypa slangii*, *E. capparidis*, *Diatrype clerodendri*, *Anthostoma flagellariae*, *Valsaria discoidea*, *V. colludens*, *Holstiella eutypa*, *Kalmusia philippinarum*, *Phyllachora congruens*, *P. atronitens*, *P. orbicula*, *P. donacina*, *Phaeodothis gigantochloae*, *Scirrhia gigantochloae*, *Rhopographella reyesiana*, *Trichonectria bambusicola*, *Seynesia alstoniae*, *Asterina lophopetali*, *Microveltis aeruginaceus*, *M. pomettiae*, *Lophodermium passiflorae*, *L. aleuritidis*, *L. reyesianum*, *Humaria conformis*, *Plicaria bananincola*, *Trichaleurina polytricha*, *Linhartia luzonica*, *L. philippinensis*, and *Bilimbia rhapidophylli*.

Aside from these new species, there are described eleven new varieties. All of this material was collected in the vicinity of Los Baños, Province of Laguna.

PATOUILLARD, N. Champignons des Philippines, I. Leaf. Philip. Bot. 6: 2239-2255.

An enumeration of seventy-seven Basidiomycetes communicated by C. F. Baker. Of these, seven are described as new species as follows:

Septobasidium bakeri, *Hexagona reyesii*, *Hydnum insulare*, *H. copelandii*, *Laschia simulans*; *Dictyophanus copelandii* and *Porolaschia raimundoi*. Three new forms of *Hexagona thwaitesii* are described, *sinuata*, *resupinata*, and *retropicta* respectively. The collections were all made in the vicinity of Los Baños, Province of Laguna, Luzon.

SYDOW, H. and P. Fungi from Northern Palawan. Philip. Journ. Sci. Bot. 9: 157-189.

This enumeration represents the results of a collection made by E. D. Merrill on the island of Palawan, largely in the vicinity of Taytay and Lake Manguao, during April and May, 1913. There are included 110 species. Among these are described nine new genera with the following as types:

Microdothella culmicola, *Heterodothis leptotheca*, *Palawania grandis*, *Stigmatodothis palawanensis*, *Actinodothis piperis*, *Aulacostroma palawanense*, *Stephanotheca micromera*, *Phellostroma hypoxylodes* and *Ischnostroma merrillii*.

Also there are described as new the following thirty-nine species: *Septobasidium subolivaceum*, *Meliola aglaiae*, *Balladyna melodori*, *Dimerosporina dinochloa*, *Henningsomyces philippinensis*, *H. pusillimus*, *Peroneutypella graphidioides*, *P. arecae*, *Didymella acutata*, *D. pandanicola*, *Merrilliopeletis parvula*, *Ophiobolus licualae*, *Anthostomella bicincta*, *A. cocoina*, *Rosellinia truncata*, *Amphisphaeria palawanensis*, *Melanomma philippinense*, *Phyllachora connari*, *Palawania cocoë's*, *Dictyothyrium giganteum*, *Micropeletella merrillii*, *Asterina nodulifera*, *A. dilleniae*, *A. lobulifera*, *Asterinella palawanensis*, *A. ramuligera*, *A. calami*, *Lembosia nervisequia*, *L. inconspicua*, *Morenoëlla memecyli*, *Phomopsis arecae*, *Cenothospora garciniae*, *Pycnothyrium pandani*, *Aschersonia macularis*, *Colletotrichum arecae*, *Cercospora licualae*, *Cercosporina helictis*, *Stigmella palawanensis*, and *Exosporium calophylli*.

GRAFF, P. W. Philippine Basidiomycetes, II. Philip. Journ. Sci. Bot. 9: 235-254, pl. 2.

This article contains an enumeration of sixty-eight species of Basidiomycetes divided among the various groups as follows: Tremellineae 3, Thelephoreae 2, Polyporeae 22, Agaricineae 31, and Gasteromyceteae 9. Among these are described the following six new species: *Lepiota sulphopenita*, *Tricholoma tenuis*,

Lentinus macgregorii, *Agaricus luzonensis*, *Stropharia radicata*, and *Coprinus flos-lactus*.

Lepiota pulcherrima is suggested as a *nomen novum* to replace Morgan's *L. candida*, which is antedated by Copeland's Philippine species of the same name. Several new combinations are also made including *Polyporus benguetensis*, *Fomes subchinoneus*, *F. unguiformis* and *Trametes elmeri*. *Lentinus macgregorii* is illustrated by a plate.

REHM, H. Ascomycetes Philippinenses, VI. Leaf. Philip. Bot. 6: 2257-2281.

The eighty-three species enumerated in this article were collected on Mount Maquiling, Mount Banajao and in the vicinity of Los Baños in Laguna Province, Luzon. In the Stictidiaceae, one new genus is described, *Propoliopsis*, with *P. arengae* on *Arenga saccharifera* as the type. The following thirty-four species are also described as new:

Guignardia albicans, *Othiella cyathoidea*, *Lentomita philippinensis*, *Anthostomella donacis*, *A. sacchariferae*, *Amphisphaeria schizostachyi*, *A. notabilis*, *Metasphaeria pseudostromatica*, *Massaria raimundoi*, *M. nigroviridula*, *Acerbia donacina*, *Allescherina strebli*, *Eutypa megalosoma*, *E. inconspicua*, *Eutypella leucaenae*, *Diatrype polygoneia*, *D. albizziae*, *Peroneutypa discriminis*, *P. philippinarum*, *Peroneutypella adelphica*, *P. cypheloides*, *Diaporthe citrincola*, *Falsaria strebli*, *V. citri*, *Hypoxyton nummularioides*, *Auerswaldia pandani*, *A. lophiostomacea*, *Nectriella ptychospermatis*, *Hypocrea mellea*, *Gillotiella late-maculans*, *Cenangella gliricidia*, *Propoliopsis arengae*, *Dasyscypha cyathea*, and *Urnula philippinarum*.

SACCARDO, P. A. Fungi Philippinenses, in Notae Mycologicae. Ann. Myc. 12: 303-314.

Of the fifty-three species enumerated from the Philippines the larger portion are described as new. One new genus is described, *Pirostomella*, with *P. raimundi* on *Ficus nota* as type. There are also described forty-one new species. These include:

Dimerosporium lussoniense, *Guignardia manihoti*, *Rosellinia umbilicata*, *Didymella lussoniensis*, *Metasphaeria reyesii*, *Ophiobolus graffianus*, *Phyllosticta circumsepta*, *Phoma sesamina*, *P. bakeriana*, *P. fallaciosa*, *Phomopsis myriosticta*, *Cytospora aberrans*, *Vermicularia fallax*, *V. horridula*, *V. breviseta*, *V. merrilliana*, *V. sesamina*, *Diplodia ricinicola*, *D. daturae*, *D. artocarpina*, *D. coicis*, *D. phaseolina*, *D. manihoti*, *D. solanicola*, *D. moringae*, *Hendersonia coicis*, *Stagonospora varians*, *Gloeosporium macrophomoides*, *G. aleuriticum*, *Colletotrichum lussoniense*, *Pestalozzia pauciseta*, *Dendrodochium lus-*

soniense, *Cercospora uredinophila*, *Goniosporium unilaterale*, *Dichotomella areolata*, *Sarcinella raimundi*, *Helminthosporium caryopsidum*, *Cladosporium lineolatum*, *Cercospora bakeriana*, *C. lussoniensis*, and *Torula anisospora*.

BAKER, C. F. The Lower Fungi of the Philippine Islands. Leaflet. Philip. Bot. 7: 2417-2542.

This extensive check-list appears as a supplement to one previously published by the same author in Elmer's "Leaflets" at the beginning of the year. To the 638 species listed in the previous report, the addition is made of 320, bringing the total of these forms known from the Islands up to 958 species. This large addition in so short a time shows an indication of the possibilities for the future, when more complete and extended collections have been made, of a very extensive fungous flora. An additional host-index is appended to the article.

BRESADOLA, G. and SYDOW, H. Enumeration of Philippine Basidiomycetes. Philip. Journ. Sci. Bot. 9: 345-352.

Among the ninety-three species listed but two are described as new. The specimens were collected in various parts of the Islands and by a number of collectors. Both new species belong to the genus *Hymenochaete* and under the names *H. subferruginea* and *H. deflectens*.

SYDOW, H. and P. Diagnosen neuer philippinischer Pilze. Ann. Myc. 12: 545-576.

The diagnoses of sixty-five new species are given and with them appear also eight new genera. The following are described as the types of new genera: *Rizalia fasciculata* on leaves of *Diospyros* sp., *Meliolina radians* on leaves of *Eugenia xanthophyllum*, *Pycnoderma bambusinum* on leaves of *Bambusa vulgaris*, *Angatia eugeniae* on leaves of *Eugenia perpallida*, *Odontoschizon parvulum* on leaves of *Quercus ovalis*, *Manilaea bambusina* on dead culms of *Bambusa blumeana*, *Exotrichum leucomelas* on living leaves of *Sumbaria rottleroides* and *Psalidosperma mirabile* on leaves of *Mitrephora* sp.

Aside from these the species described as new include:

Septobasidium phyllophilum, *Aithaloderma longisetum*, *Balladyna uncinata*, *Meliola subapoda*, *M. hamata*, *M. sacchari*, *M. fagraeae*, *M. champereiae*, *M. linocierae*, *M. canarii*, *M. gliricidiae*, *M. bataanensis*, *M. scaevolae*, *M. rizal-*

ensis, *M. ramosii*, *M. panicola*, *M. micromera*, *Physalospora bullata*, *Mycosphaerella ditissima*, *M. aristolochiae*, *Chaetosphaeria meliicola*, *Acanthostigma vilae*, *Asterina anisopterae*, *A. camarinensis*, *A. densa*, *A. grammocarpa*, *A. oligocarpa*, *Asterinella anamirtae*, *A. dipteroearpi*, *A. gracilis*, *Morenoella anisocarpa*, *M. anisopterae*, *M. lagunensis*, *M. ramosii*, *M. tenuis*, *Lembosia decolorans*, *Microthyrium imperatae*, *Microfeltella camarinensis*, *M. ramosii*, *Pycnocarpon nodulosum*, *P. fimbriatum*, *Hypomyces sulphureus*, *Phyllachora fremnae*, *Telimena graminella*, *Ellisiodothis pandani*, *Uleopeltis bambusina*, *Myriangium philippinense*, *Taphrina linearis*, *Coccomyces memecycli*, *Phyllosticta sumbaviae*, *Macrophoma euphorbiae*, *Psalidosperma mirabile*, *Pirostomella major*, *Gloeosporium merrillii*, *Colletotrichum sumbaviae*, *Cercospora macarangae*, *Vermicularia ananassae* and *Microcera merrillii*. *Meliola cladotricha*, *M. pulcherrima*, and *M. arborescens* are transferred to the genus *Meliolina*.

1915

SYDOW, H. and P. Fungi Exotici Exsiccati, Fasc. VII-IX. Ann. Myc. 13: 68-70.

Of the 150 numbers issued in these three fascicles, one half are Philippine specimens. Four numbers are cotype material of new genera. *Aulacostroma palawanense* on *Pandanus Merrillii* and *P. tectorius*, *Pycnoderma bambusinum* on *Bambusa vulgaris* and *Schizostachyum* sp., *Exotrichum leucomelas* on *Sumbavia rottleroides* and *Ischnostroma merrillii* on *Talauma* sp. Cotype material of new species are also represented in generous numbers. Of these twenty-one appear under the following names:

Mohortia drepanoclada, *Aithaloderma longisetum*, *Balladyna uncinata*, *Meliola champereiae*, *M. linocicrae*, *M. ramosii*, *M. rizalensis*, *Chaetosphaeria meliicola*, *Telimena graminella*, *Pycnocarpon nodulosum*, *Microfeltella ramosii*, *Microthyrium imperatae*, *Lembosia decolorans*, *L. inconspicua*, *Asterina densa*, *A. oligocarpa*, *Asterinella gracilis*, *Taphrina linearis*, *Phyllosticta sumbaviae*, *Ceuthospora garciniae*, and *Cercosporella uredinophila*.

BRESADOLA, J. Basidiomycetes Philippinenses, III. Hedwigia 41: 289-308.

This third article of Bresadola's series includes an enumeration of 101 species of Basidiomycetes and has appended eight species of Ascomycetes and two Hyphomycetes. Among the Basidiomycetes the following twenty-two are described as new:

Panus murinus, *Xerotus vinoso-fuscus*, *Polyporus spadiceus*, *P. graffianus*, *P. crustulinus*, *P. fusco-badius*, *Fomes fusco-pallens*, *F. validus*, *Poria lurida*, *P. porphyrophaea*, *Hexagonia umbrina*, *Grammothele cineracea*, *G. delicata*, *Hymenochaete variegata*, *H. mollis*, *H. livens*, *Veluticeps philippinensis*, *Corticium hinnuleum*, *Gloeocystidium lacticolor*, *Septobasidium merrillii*, *Pterula*

fruticicola, and *Heterochaete pallida*. Two species of Ascomycetes are also described as new under the names *Eutypa polygramma* and *Nummularia merrillii*.

PATOUILLARD, N. Champignons des Philippines Communiqués par C. F. Baker, II. Philip. Journ. Sci. Bot. 10: 85-98.

An enumeration of ninety-four species is included in this article. Among these one new genus appears, *Duportella*, with two new species, *V. velutina* and *D. raimundoi*, under it. Ten other species are also described as new including:

Septobasidium laxum, *Hymenochaete pavonia*, *Leucoporus amceides*, *Leptoporus armatus*, *Hexagona lachnochaeta*, *Elmerina foliacea*, *Daedalea philippinensis*, *Ganoderma bakeri*, *G. plicatum*, and *Crinipellis fragilis*. The specimens listed were all collected in the Province of Laguna, Luzon.

SACCARDO, P. A. Fungi Philippinenses, in Notae Mycologicae. Ann. Myc. 13: 126-128.

Notes on eight Philippine species are here given. Of these, seven, *Uredo claoxyl*, *Limacinia biseptata*, *Microxyphium dubium*, *Didymosphaeria caespitulosa*, *Massarinula obliqua*, *Rhabdospora synedrellae* and *Illosporium tabacinum* are described as new. The eighth is described as a new form under the name *Phomopsis palmicola* (Wint.) Sacc. forma *arecae*.

THEISSEN, F. and SYDOW, H. Die Dothideales. Ann. Myc. 13: 149-746, pl. 1-6.

In this monograph of the Dothideales, Theissen and Sydow cite numerous species as being found in the Philippines. Among these should be noted the following, *Darwinella orbicula* is made the type of a new genus, *Elmerococcum*, *Roumegueria ichnanthi* is made the type of the new genus *Phragmocarpella* to which *Homostegia fusispora* is also transferred and *Munkiodothis* is described as a new genus with *M. melastomata* from Java and the Philippines as the type. The genus *Catacauma* receives the following: *C. circinata*, *C. elmeri*, *C. lagunensis*, *C. valsiforme*, *C. apoense*, *C. sanguineum*, *C. aspideum* and *C. pterocarpi*, which are transferred from the genus *Phyllachora*. *Catacauma garciae*, *Trabutia vernicosa*, and *T. elmeri* are described as new species from the Philippines.

A number of Philippine species hitherto assigned to this group

are excluded. The species *Auerswaldia decipiens*, *A. pandani*, *A. gigantochloae*, *Dothidella derridis*, *Scirrha luzonensis*, and *Phaeodothis gigantochloae* are said to belong to the Sphaeriales. *Hysterostomella alsophilae* and *Gilletiella late-maculans* are also excluded, the former being a Discomycete and the latter a Lichen.

REHM, H. Ascomycetes Philippinenses, VII. Leagl. Philip. Bot. 8: 2921-2933.

The seventh contribution of this series presents a list of thirty-three species and contains descriptions of seventeen which are described as new. These include:

Hypoxylina philippinensis, *Nectria flavido-carnea*, *N. leucaenae*, *Broomella seae*, *Paranectria luxurians*, *Lophodermium planchoniae*, *L. aleuritidis*, *Coccomyces dubius*, *Briardia maquilungiana*, *Cenangium blumeae*, *Lagerheimia dermatodea*, *Niptera grexiae*, *Trichobelonium melioides*, *Pezizella ombrophilacea*, *Humaria caballina*, *Plicaria tropica*, and *Lembosia pandani*.

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